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ORIGINAL LECTURES.

A COURSE OF LECTURES ON DERMATOLOGY.

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LECTURE I.

ANOMALIES OF SECRETION, HYPERÆMIAS, INFLAMMATIONS.

SCIENCE is classified knowledge, and the development of any science is conditioned by improved methods of classification. In dermatology the subject of classification is important from a scientific and from a practical standpoint, and the history of this science shows that various methods of classification, from the most simple to the most complicated, have been proposed from time to time. Two of them may be alluded to. About the beginning of this century Willan grouped the affections of the skin according to the elementary lesions, as, for example, macules, vesicles, papules, pustules, etc. The classification was useful at the time, and was attractive and simple. It was, however, insufficiently comprehensive, embracing by no means all diseases, and if followed out led to confusion.

The classifications in vogue to-day have as a basis that put forth by Hebra and Rokitansky, about forty years ago, and are based upon the anatomy of the skin, the pathology of the lesions, and, to a slight extent, upon their etiology. The following classification, which will be here used, embraces nine classes.

I. Anomalies of secretion (sebaceous glands, sweat-glands); *e. g.*, seborrhœa, hyperidrosis.
II. Hyperæmias; *e. g.*, simple erythema.
III. Inflammations; *e. g.*, eczema, psoriasis, acne.
IV. Hemorrhages; *e. g.*, purpura.
V. Hypertrophies; *e. g.*, chloasma, ichthyosis.
VI. Atrophies; *e. g.*, vitiligo.
VII. New growths; *e. g.*, cancer, lupus, syphilis.
VIII. Neuroses; *e. g.*, pruritus.
IX. Parasites; vegetable, *e. g.*, tineæ; animal, *e. g.*, scabies.

CLASS I.—ANOMALIES OF SECRETION.

SEBORRHŒA may be defined to be a disease of the sebaceous glands, characterized by an excessive and abnormal secretion of sebaceous matter, forming upon the skin an oily coating, crusts, or scales. Two varieties are recognized, namely, seborrhœa oleosa and seborrhœa sicca, which may exist separately or together. Seborrhœa oleosa occurs chiefly on the face, especially the nose and forehead. In its milder form it is not an uncommon affection.

Seborrhœa sicca, or dry seborrhœa, occurs upon the chest and back, but most frequently upon the scalp, where in its milder form it gives rise to what is ordinarily known as dandruff. It consists in the formation of scales, loose or adherent, and when the process continues on the scalp the hairs become dry, fall out, and baldness ensues. Many cases of premature baldness arise from neglected seborrhœa. The same form may attack the hairy portions of the face. On the back and chest the lesions consist of dime or quarter-dollar sized, rounded or circinate spots, covered with dry or greasy scales, with a patulous condition of the ducts of the sebaceous glands. The genital region also may be affected.

Seborrhœa sicca occurs most frequently in light-haired, pale, anæmic subjects, while seborrhœa oleosa is found more in dark-haired subjects. Both forms are met with mostly in adolescence, and they are usually associated with general debility. The secretion seems to be largely under the control of the nervous system, and the pathology of the process is that of a functional derangement of the sebaceous glands with a tendency to subsequent atrophy of the glands and the skin. A microscopic examination of the secretion shows degenerated granular epithelial cells mixed with amorphous, oily, molecular débris.

When existing on the scalp the disease must be differentiated from eczema, psoriasis, and ringworm. Want of infiltration of the deeper layers of the skin, dryness, and excessive scaling are sufficient to distinguish it from the first; its diffusion over large areas, want of sharp definition at the borders, grayish or yellowish scales, on a pale or slightly hyperæmic base, would dispel all doubts as to the second, while a microscopic examination of some of the scales would render it impossible to confound it with the third. On the chest it may furthermore be mistaken for ringworm, but here the microscope would again decide. Then again on the face it may be confounded with lupus erythematosus, but in pronounced cases of the latter there is usually sharp definition of the lesions accompanied by marked infiltration and thickening, also later, by the formation of atrophic scar-tissue, all of which is absent in seborrhœa.

The treatment of seborrhœa is important; it is sometimes an easy matter, at others one of great difficulty. A general constitutional treatment is often useful, the same consisting of out-door exercise, hygiene, regulation of diet, and the administration of cod-liver oil, iron, and arsenic. The latter may be given in the following eligible form:

℞.—Liq. potassii arsenitis, . . . ʒj.
Vini ferri, ... ʒiv.
S.—One teaspoonful three times a day, to be taken in a wineglassful of water after meals.

The sulphide of calcium in doses of one-tenth to one-half grain, kept up for weeks or months, may also be mentioned, the same exerting a tonic effect upon the

sebaceous glands. Local treatment is, however, the most valuable. In seborrhœa of the scalp, when occurring in the female, it is never necessary to cut the hair. The scales must first be removed, and this may be effected by the use of water with a solution containing two parts of soft soap and one part of alcohol. Where the scales are adherent, olive oil may be employed, thoroughly saturating the part, and allowing it, covered with a thick flannel cap, to remain over night; in the morning the scales may readily be washed off with soap and hot water. After the parts are cleansed, ointments may be applied, and among the best are those of sulphur and mercury. An ointment of sublimed or precipitated sulphur, one to three drachms to the ounce of lard or vaseline, may be mentioned as one of the most useful. There may be cases in which it is ineffectual, then an ointment of white precipitate, fifteen to forty grains to the ounce of vaseline, may be used with advantage; or the red oxide of mercury, five to twenty grains to the ounce. Tarry preparations, such as oil of cade, in the strength of one or two drachms to the ounce of alcohol, are often of service. Tar ointment is also valuable. The following may be used later in the treatment:

℞.—Ol. ricini, ... ʒij.
Acidi carbolici, ... ♏xxx.
Alcoholis, ... ʒiv.
Sig.—Apply once daily.

It is often surprising to see how much stronger remedial applications the scalp will stand than the other parts of the body.

In seborrhœa of the face and body, mercurial and sulphur ointments are the most useful; their conjoint use, of course, should be avoided. The following lotion of sulphide of zinc may be used with excellent result.

℞.—Zinci sulphatis,
Potassii sulphureti, . . . āā ʒss to ʒj.
Alcoholis, ... fʒss to fʒiij.
Aquæ rosæ, ... fʒiv.
Sig.—Apply fifteen minutes at a time with a soft sponge. Shake before using.

In this combination a chemical decomposition occurs, in which a grayish precipitate of sulphide of zinc is thrown down.

Another valuable lotion is that known as Vleminckx's solution, the formula of which is as follows:

℞.—Sulphuris sublimati, ... ʒi.
Calcis, ... ʒss.
Aquæ, ... fʒx.
Coque ad fʒvj, filtra, adde ol. anisi q. s.
This should be used diluted, one part to four or twelve of water.

COMEDO is a disorder of the sebaceous glands characterized by yellowish or whitish pin-point and pin-head sized elevations, containing in their centre exposed blackish points. The affection is known in popular language as "grubs," "grub worms," and "blackheads." It is found mostly on the face, back of neck, chest, and back. The lesions are usually numerous, often associated with acne and sebaceous tumors, and run a chronic, sluggish course. It occurs generally in young persons between the ages of fifteen and twenty-five years, and is often dependent upon general debility, constipation, dyspepsia, and chlorosis. The skin is improperly nourished, and acquires a thick muddy complexion. The process is confined to the sebaceous glands and ducts, consisting of a distention of the follicles with sebaceous matter. Sometimes the comedo contains a small curled-up hair, sometimes a parasite known as *demodex folliculorum*, which, however, is perfectly harmless, and is in no way a cause of the disease.

The treatment should be both internal and local. Internally, tonics of iron and arsenic, and saline aperients, may be administered; and locally, hot baths, with soap and friction. The comedones should be expressed by means of a watch-key, or, where they are very numerous, a curette may be employed with advantage. Stimulating ointments and lotions should be used, especially those containing sulphur.

℞.—Sulphuris sublimati, ... ʒiij.
Adipis benz., ... ʒij.
Vaseline, ... ʒv.
Sig. Apply at night.

Vleminckx's solution,—one part to three or six of water, or a lotion containing equal parts of sulphur, glycerine, carbonate of potash, ether, and alcohol may also be applied with good results. Attention must also be directed to regulation of any functional disturbance of the stomach or bowels that may exist.

MILIUM consists in the formation of small, roundish, whitish, sebaceous, non-inflammatory elevations, situated in the skin beneath the epidermis. They are whitish or pearl-colored, rounded or acuminate; are found for the most part on the face, eyelids, and foreheads of elderly persons, and may exist in such numbers as to be disfiguring. The lesions may undergo calcification, giving rise to *cutaneous calculi*, the product being chiefly phosphate of lime. The causes of the disease are the same as those which produce comedo and cyst. Examination shows the lesions to have no apertures on the surface, and to consist of accumulations of sebaceous matter within the glands. In the matter of treatment, electrolysis with a fine needle, or incision and the application of tincture of iodine or of nitrate of silver may be resorted to.

SEBACEOUS CYST, or WEN, appears as a variously sized, firm or soft, rounded, more or less prominent tumor, having its seat in the skin, or subcutaneous connective tissue. It is found especially on the scalp, face, back, and scrotum. There are two kinds, one with open, the other with closed ducts. The course of the development is slow. In diagnosis they must be differentiated from fatty tumors, and from molluscum epitheliale. The treatment should be radical, and consist of a removal by dissection of the cyst with its wall. Hypodermic injections of tincture of iodine may also be mentioned as useful.

HYPERIDROSIS is a functional disease of the sweat-glands, consisting in an increased flow of sweat. It may be universal or local, limited or excessive, unilateral or bilateral. It is generally met with on the palms of the hands and soles of the feet. The secretion may be so excessive that it drops from the hands, thus incapaci-

tating an affected individual from engaging in any pursuit. The secretion is not accompanied by any odor.

BROMIDROSIS, also a functional disease of the sweat-glands, is characterized by more or less sweating, and a heavy or an offensive odor. This may be universal or local, generally the latter, and usually affects the axillæ, genitalia, hands, and feet. The odor may be heavy or stinking, or be likened to that of a goat or to urine; odors, as of violets or fruits, as pineapples, are also rarely thrown off from the body. Bromidrosis when highly developed is a disgusting affection; the individual becomes a burden to himself or herself, may be kept out of employment, and naturally inclines to shun all society.

CHROMIDROSIS is an affection in which the sweat is variously colored, being bluish, blackish, reddish, greenish, and yellowish. Prussian blue, indigo, and copper have been found in the secretion. In *hæmatidrosis*, blood corpuscles are found in the sweat, and in *uridrosis* the sweat contains urea. *Phosphorescent* sweat is occasionally met with. Here the body becomes luminous in the dark. It occurs sometimes in individuals who have partaken of putrid fish, also in the late stages of phthisis.

In the treatment of diseases of the sweat apparatus, more especially hyperidrosis, tonics of iron, quinine, arsenic, and the mineral acids should be exhibited, also belladonna, atropia, and ergot. Locally, lotions may be employed, and among the best are those of tannic acid and salicylic acid in the strength of one drachm to four or eight ounces of alcohol. Tincture of belladonna, full strength or diluted, is also valuable. Boracic acid, sulphate of zinc, alum, and chloral may also be referred to as useful. The application of the lotion may be followed by some dusting powder, as starch, lycopodium, oxide of zinc, alum,—one-half drachm or more of the latter to the ounce. Dusting powders containing boracic and salicylic acids must be mentioned as being serviceable.

One of the best modes of treatment is that by diachylon ointment and olive oil, equal parts, spread on linen cloths in form of plaster, and wrapped around the affected parts, the dressing being changed twice in the twenty-four hours. In the treatment of bromidrosis the same general rules apply. In this affection, the oleate of mercury, ten or fifteen per cent. strength, may be added to the list.

CLASS II.—HYPERÆMIA.

There are many diseases of the skin which commence with hyperæmia, but pass so quickly into inflammation that they are not classed under hyperæmia. Thus, in this class are embraced but two diseases, erythema simplex and erythema intertrigo.

ERYTHEMA SIMPLEX is usually local and occurs in the form of spots and patches variously sized and shaped. It is met with chiefly in infants, and may be occasioned by some disturbance of digestion. The lesions usually last only a few hours, but may continue several days. Other forms of this disease are caused by exposure to the sun, traumatism, local irritants, and poisons.

ERYTHEMA INTERTRIGO is a hyperæmic disease, characterized by redness, heat, and an abraded surface, with maceration of the epidermis. It is commonly known as chafing, and is caused by friction between two folds of skin, occurring especially in the axillæ, groins, beneath the mammæ, and between the nates. It is usually sudden in its advent, and is found for the most part on infants and on corpulent persons during hot weather. The disease is not always a passing disorder, but may persist, sometimes, for months.

Erythema intertrigo is the only form of hyperæmia calling for treatment, and it may consist in the use of dusting powders, such as starch, Venetian talc (silicate of magnesia), or alkaline lotions, as of borax or castile soap, followed by some dusting powder. If it does not yield to such simple measures, black wash, lotions of tannic acid, boric acid, or sulphate of zinc may be employed. If it still persists, then certain other remedies, to be mentioned under the treatment of erythematous eczema, may be used.

CLASS III.—INFLAMMATIONS.

ERYTHEMA MULTIFORME is an acute inflammatory disease, characterized by reddish, more or less variegated macules, papules, and tubercles, discrete or in patches. It occurs in various forms. The commonest is the papular manifestation, *erythema papulosum*. Sometimes the lesions are in the form of a ring, *erythema annulare*. Sometimes in the form of variously colored concentric rings, *erythema iris*. At times the patches assume large gyrate forms with irregular edges, *erythema marginatum*. The disease is acute, and, as a rule, of short duration, running its course in two or three weeks, sometimes being accompanied by febrile disturbance. It is inclined to show itself in crops, and it is a peculiarity of this disease to appear as a rule first upon the backs of the hands Generally it is confined to this region. The subjective symptoms are insignificant, compared with the apparent violent nature of the inflammation. It is most frequently met with in spring and autumn, and relapses are known to occur. Comparatively little is known of its pathology. The histology of the lesions reveals nothing beyond the ordinary inflammatory changes, and authorities regard it as the result of vaso-motor disturbance. In the diagnosis it must be distinguished from herpes iris, urticaria, eczema papulosum, and erythema nodosum. Little is to be said about the treatment, as the disease usually passes off in a week or two. Active local treatment is to be avoided, as it may aggravate the symptoms.

ERYTHEMA NODOSUM is an acute inflammatory disease, characterized by the formation of rounded, ovalish, or variously sized, more or less elevated reddish nodes. There is usually some prodromic febrile disturbance, and before the eruption appears, it is difficult to make the diagnosis. The eruption makes its appearance suddenly, having preference for the forearms and legs, especially over the tibiæ, and the site of the lesions is the seat of a burning or shooting rheumatic pain. The lesions vary in size from a chestnut to an egg, are rounded or ovoidal, present a variegation in color, and attain their height usually between the fourth and sixth day, when they look shining, and are tense. They are firm and painful on pressure, so that when over the tibiæ the patient may be unable to walk. The disease may also attack the mucous membrane of the mouth, tongue, and gums.

It usually occurs in weakly or debilitated subjects, is preceded and accompanied by languor, malaise, and rheumatic pains, and is of most frequent occurrence in

females, in childhood, and in adolescence. It is closely allied to erythema multiforme, some authorities even considering it as an advanced stage of this disease. The lymphatics are often involved, and the exudation is either plastic, serous, or hemorrhagic. The lesions may be mistaken for contusions, the similarity has even led to the name *dermatitis contusiformis*. It may be further confounded with a bruise, erysipelas, and threatening abscess.

The lesions are more deeply seated and more nodular than in erythema multiforme. As the disease ends in spontaneous recovery, little or no treatment is indicated. When the febrile symptoms are marked, quinine, aconite, laxatives, and salines may be employed. Rest is important, and locally, hot water applications may be made. The duration of the disease is from two to three weeks, and relapses are not common.

URTICARIA is a disease which we are liable to meet with any day. It is known popularly as *nettle-rash* or *hives*, and is an inflammatory disease characterized by the formation of wheals of a whitish, pinkish or reddish color, accompanied by stinging, tingling or pricking sensations. Its advent is usually sudden, and the lesions are variable as to size, shape, and color. They may be circumscribed or diffuse, often showing a tendency to coalesce, forming patches of a rounded, ovalish, or elongate shape, sometimes gyrate. They are soft and firm, and may rise considerably above the surface. On an individual affected with urticaria, the eruption may be evoked by passing the finger-nail over the skin.

The disease is generally ephemeral, lasting but a few hours or a day, and individual lesions are capricious and fugitive. Every part of the integument is liable to be attacked, and it is apt to go from one region to another. It may even appear on the mucous membrane of the mouth and pharynx to the exclusion of the rest of the body, and may occur at all periods of life, children being particularly liable to it. It is an acute disorder, but may be chronic by relapses.

URTICARIA PAPULOSA is a form of the disease met with among the poorly cared for children and infants. It is common in London, but rare in Philadelphia. The lesions are in the form of small papules, are very persistent, and are annoying, especially at night. Urticaria may also occur with other diseases; *e. g.*, purpura, constituting *purpura urticans*. It may assume a bullous form, *urticaria bullosa;* or a large nodular type, *urticaria tuberosa*, or giant urticaria, the lesions having an elevation of a half inch or an inch, and are found most frequently about the head.

ACUTE URTICARIA.—The advent is sudden and is preceded often by slight febrile symptoms, languor, malaise, gastric derangement, and constipation. In a few hours the whole surface of the body may be covered with wheals. The duration is variable, and relapses may or may not occur.

CHRONIC URTICARIA.—The lesions are the same, though less acute than in the former variety, and the disorder may last for months or years; successive crops appearing daily or at intervals. The wheals may be ephemeral or persistent, while the general symptoms are usually wanting.

The causes of urticaria are numerous and varied. Among external irritants may be mentioned: stinging nettle, caterpillars, jelly-fish, etc. Among internal causes: gastric and intestinal derangement, fish, shell-fish, certain fruits, chloral, salicylic acid, iodide of potassium, intestinal worms, menstrual and other uterine disorders, organic diseases of internal organs, spinal irritation, neuralgia, asthma, and albuminuria. The pathology of the lesions consists of an acute inflammatory process in the papillary layer, with œdema of the skin. The circulation is interfered with, in the wheal the blood being driven from the centre to the periphery. The process is largely under the control of the nervous system. In some cases no cause can be detected.

The diagnosis is easy. It must be differentiated from erythema papulosum, erythema tuberculosum, and erysipelas. In regard to treatment, it is always important to investigate the cause, and when found to be a disorder of the alimentary canal, emetics, salines, and the repeated use of aperients should be ordered. Diet should be regulated, and some alkali administered; *e.g.*, liquor potassæ. In chronic urticaria, diuretics may be employed with benefit; *e.g.*, acetate of potassium. When gouty symptoms are present, alkalies and colchicum are indicated. Other remedies which may be found useful, are quinine, pilocarpine, atropia, sulphite and hyposulphite of soda, bromide of potassium, and chloral. Change of climate may also at times be useful.

Local treatment is of importance with a view of immediate relief. This may consist of baths or lotions, the same being agreeable and cooling. Lotions of vinegar and water, alcohol, brandy, or whiskey, may be used. The baths may be alkaline or acid. Carbolic acid is an excellent remedy, so, also, thymol, one to three grains to the ounce; chloral, chloral and camphor, each one drachm to one ounce of ointment, chloroform, ammonia water, and dilute hydrocyanic acid.

ORIGINAL ARTICLES.

ON THE PATHOLOGICAL AND PRACTICAL RELATIONS OF THE DOCTRINE OF THE BACILLUS TUBERCULOSIS.[1]

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THE literature of the last quarter of a century, so far as it relates to pulmonary phthisis, offers a striking example of the mutability of medical opinions, and an instructive lesson for truth-seekers in the field of medicine. About twenty-five years ago, Virchow enunciated the dogma that the name tubercle should be restricted in its application to neoplasms known as miliary tubercles, or the granulations of Boyle; the phthisical products distinguished as infiltrated, crude, yellow, or cheesy tubercle having no claim to be considered as tuberculous. This dogma rested on an exclusively histological basis. It was accepted by many French and British, as well as by most of the German pathologists, and largely in this country. As a consequence, pulmonary phthisis and pulmo-

[1] Read at the First Stated Meeting of the New York County Medical Association, January 14, 1884.

nary tuberculosis were regarded as essentially distinct affections.

Phthisis, being relegated among the purely inflammatory diseases, received a variety of new names, such as broncho-pneumonia, chronic catarrhal pneumonia, cheesy pneumonia, lobular pneumonia, etc. That phthisis and true tubercles were associated, in a certain proportion of cases, was admitted, and, reversing the teaching of Laennec as regards their relationship, the tubercles, in these cases, were regarded as occurring, not anterior, but secondary, to the phthisical products, being attributed to an auto-infection either from phthisical or degenerating products of some kind, somewhere within the body. Reasoning from these premises, in opposition to the results of the clinical studies of Laennec, Louis, and others, the development of phthisis was attributed often to an extension of inflammation from the bronchial tubes, and, not infrequently, to an antecedent lobar pneumonia. A peculiar predisposition to phthisis, as expressed by the terms diathesis. dyscrasia, and cachexia, was repudiated. A susceptibility to morbific agents of all kinds was alone admitted, under the name vulnerability. As practical consequences, patients affected with phthisis were treated by measures addressed to chronic inflammatory affections. Local bloodletting, counter-irritation, confinement within doors, mercurialization, and restricted diet—measures heretofore in vogue, which had become obsolete because experience had shown them to be hurtful—entered again, to a greater or less extent, into the practice of physicians in cases of phthisis.

These pathological, etiological, and therapeutical views, so widely at variance with those which had been established by the clinical studies of Laennec, Louis, and others, had their origin in the microscopical observations which led Virchow to conclude that an essential distinction exists, as regards the anatomical elements, between the ordinary phthisical products and the bodies to which he restricted the name tubercles.[1] During the greater part of the last quarter of a century, a large share of medical literature, in different countries, has been devoted to investigations and discussions either relating to, or growing out of, the dogma enunciated by Virchow. As a result of these investigations and discussions, the dogma and, of course, all deductions therefrom were at length shown to be erroneous.

It required, thus, nearly twenty-five years to emerge from errors due to a false conclusion from microscopical appearances observed in a pathological laboratory. The errors were not merely of pathological interest, but they influenced unfavorably the treatment of patients affected with phthisis. What is the lesson to be learned from this retrospect? It teaches, of course, the evils of hasty or rash pathological deductions; but I will go further and say that it teaches the importance of the clinical study of diseases as a safeguard against errors arising from exclusive attention to histological researches. Laennec, Louis, and they who followed in their footsteps, were painstaking, careful, and conscientious clinical observers. The fruits of their studies are as valuable to-day as they have been in the past, and they will remain so as long as the diseases which they studied and the human constitution continue unchanged.

In speaking thus of the importance of clinical medicine, I do not undervalue pathological researches. Of the importance of these, the subject of my paper offers a brilliant example.

A notable event in the literature of phthisis was the announcement by Villemin, in 1865, of the inoculability of tubercle. The accuracy of Villemin's experimental observations was speedily established by other observers. But the conclusion that inoculability proved the existence of a specific virus was opposed by experiments which appeared to show that morbid matter evidently not tuberculous, as well as putrescent organic substances, and those even which could have only a mechanical effect, were capable of inducing tuberculous disease in certain animals by inoculation. These apparent obstacles in the way of the recognition of a specific virus had been, in a great measure, if not entirely, removed when the discovery of a particular micro-organism—the bacillus tuberculosis—was announced by Koch in 1882.[1] The latter discovery may be said to be a sequel of that by Villemin.

Two things are remarkable in view of the recency of the announcement of Koch's discovery. It is remarkable that it should have at once excited so much interest in different countries. This has rarely been the case with past discoveries of like novelty as well as importance. It is remarkable that they who have already accepted the discovery are among those who, as practical histologists, are most competent either to confirm or disprove it.

The statement of the fact that a peculiar micro-organism, to which Koch gave the name bacillus tuberculosis, was found by him in tuberculous products, by no means expresses the length and breadth of the discovery. This fact, however, lies at the foundation of a new doctrine—a doctrine apparently in conflict with well-founded pathological truths, and of great practical importance.

Before considering its pathological and practical relations, let us inquire of what does this doctrine consist, and on what does its validity rest? Is the bacillus tuberculosis a veritable micro-organism?

The affirmative answer to this question must be based on the testimony of competent and trustworthy microscopists, and there is almost entire unanimity among these in the conclusion that the

[1] In a recent discussion at a meeting of the Berlin Medical Society, Virchow proposed to distinguish miliary tubercles and caseous hepatization as "bacillary affections." There does not seem to be any intrinsic impropriety in this name, but the unfortunate consequences of his former definition of tubercle do not afford encouragement for another attempt in the way of nomenclature.

[1] Of those who claimed that tuberculous disease in certain animals may be artificially produced by inoculation with non-tuberculous substances, Cohnheim and Wilson Fox were the most prominent and influential. As showing that, in the minds of these distinguished pathologists, the desire for truth is paramount to the pride of opinion, it is pleasant to state that Cohnheim, prior to Koch's discovery, and Wilson Fox, quite recently, have publicly made avowal that they were mistaken.

bacillus tuberculosis is a veritable micro-organism. Of this, positive proof is the reproduction of the organism by culture outside of the body.

Is the bacillus tuberculosis constantly found in morbid products, which, irrespective of its presence, are known to be tuberculous?

The affirmative answer to this question is sustained by a very general agreement among competent and trustworthy microscopists.

Is the bacillus tuberculosis found in morbid products which otherwise have no claim to be recognized as tuberculous?

So far as I know, an affirmative answer to this question is *not* sustained by the testimony of competent and trustworthy microscopists.

From these data it may logically be concluded that the bacillus tuberculosis is a peculiar parasitic micro-organism which is characteristic of tubercle. But the doctrine goes further. The nature and extent of the pathological connection of the bacillus with tuberculous disease are to be inquired into.

Is the bacillus tuberculosis the causative agent in the development of tuberculous disease?

This is an all-important question as regards the pathological and practical relations of the doctrine. Koch's discovery embraced the induction of tuberculous disease in certain animals by inoculation with the bacillus. In order for inoculability to constitute proof that the organism, *per se*, is the causative agent in the experiments, it is evident that the bacillus must be devoid of any morbific matter which might be adherent to it. This essential requirement is secured by repeated cultivations in a culture-medium out of the body. Koch found that the organism, after it had been carried through several generations, was capable, by inoculation, of inducing tuberculous disease. Assuming accuracy of the observations, this result is demonstrative proof that the bacillus, at least in the experiments on certain animals, is the causative agent in the development of tuberculous disease. The accuracy of Koch's experimental observations in this regard has not been disproved. Reasoning from analogy, and still assuming the correctness of the data, it is a logical conclusion that pulmonary phthisis, in the human subject, is caused by the presence of this parasitic organism.

This completes the doctrine of the bacillus tuberculosis. It follows therefrom that pulmonary phthisis is an infectious disease, using this term infectious in the sense in which it is at present used by most medical writers, namely, as denoting disease dependent on special causative agents, which, under favorable circumstances, are capable of multiplication indefinitely either within or outside of the body. The multiplication of the special causative agent in phthisis, takes place within the body. The disease is therefore communicable by means of the causative agent, the bacillus. The causative agent, thus, is a *contagium vivum*. If the validity of the doctrine be acknowledged, it must be admitted to be vastly improbable that phthisis is ever developed without the presence of the parasite. It may be laid down as a law in etiology, that the agency of special causes is essential in the development of all infectious diseases, and there is no reason for supposing that phthisis is an exception to this law. Another conclusion must be admitted, namely, that pulmonary phthisis, is primarily a local affection. The initial morbid processes take place in the lungs, being due to the presence of the parasite. The bacilli, doubtless, inhaled with the inspired breath, become colonized within the pulmonary alveoli. They give rise to tuberculization in the situations which they inhabit. The local affection extends in consequence of their invasion, successively, of different parts of the pulmonary organs, and the development of the disease in other situations depends on their migrations.

We are now to consider an apparent antagonism between the doctrine of the bacillus tuberculosis and certain facts derived from the clinical study of pulmonary phthisis. In view of such an antagonism, what are we to do as seekers after truth? Are we to repudiate the doctrine on the one hand, or the clinical facts on the other hand? We are to do neither the one nor the other. We are to satisfy ourselves of the truth of the doctrine, and that the clinical facts are well grounded; then, the doctrine and the facts are to be reconciled. If the doctrine be true and the facts well grounded, there must be a way of reconciliation. In reality, the antagonism is apparent only, not actual, as I shall endeavor to show. The antagonism relates especially to the existence of a tuberculous diathesis, to the well-established operation of causative agencies other than a contagium, and to a lack of clinical evidence of communicability.

Pulmonary phthisis is eminently a diathetic disease. The diathesis, that is, the predisposition, is evidently in some persons innate. How otherwise are to be explained the instances in which many children in certain families become victims of the disease—instances which are too many to be accounted for on the ground of accidental coincidence? No one who has given any attention to the statistics of this disease, can doubt that heredity is involved in the causation. That the disease is developed much oftener in some climates than in others, is certain, and it is equally certain that, irrespective of climate, insalubrious situations, a humid soil, confinement in illy-ventilated rooms, insufficient alimentation, and mental depression, exert a causative influence. No fact in medicine is better established than that age enters largely into the causation of pulmonary phthisis.

How are these facts to be reconciled with the doctrine which teaches that the efficient causative agent in the development of this disease is a contagium? And, as regards communicability, statistics have failed to prove that this disease is contagious. It is true that isolated instances seem to point to its communicability, but the analytical study of large collections of recorded cases seem to furnish evidence against, rather than for, contagion. Of those who are brought into close proximity to phthisical patients in hospitals or elsewhere, how small is the proportion who become affected with the disease! At the time of Koch's discovery, there were a few physicians who believed that phthisis

might be communicated; but the great majority of the members of the medical profession had no faith in its contagiousness. How are these facts to be reconciled with the doctrine which teaches that phthisis is never developed without the presence of a contagium vivum?

The special morbific agents which give rise to infectious diseases require for the efficiency of their causative action certain special concurrent, coöperating conditions within the body. This requirement is greater in some than in other diseases, but the statement is probably applicable to a greater or less extent to all. The special agent is an essential factor; and another, not less essential, is the existence of the requisite concurrent, coöperating conditions. The nature of these conditions is unknown, but the fact of the necessity for their existence in the causation of diseases is as certain as if they were known. We may embrace these conditions under the name predisposition. If the special causative agent be a micro-organism, it is customary to say that, like certain plants, it needs for its growth and multiplication certain peculiarities of soil. The term predisposition embraces these peculiarities. The two factors in the causation, namely, the special causative agent and the concurrent, coöperating conditions embraced under the name predisposition, in their application to yellow fever, were compared by the late Dr. Barton, of New Orleans, to the two blades of a pair of scissors; their efficiency depends on their being joined together; separated, each is powerless.

The predisposition to pulmonary phthisis involves all causes exclusive of the special causative agent—the bacillus. An innate tendency, heredity, and the other causes already referred to, exert their influence by inducing or promoting the predisposition to the disease. The predisposition is the diathesis. It may be either congenital or acquired. It may exist and afterward disappear. It may probably be removed by measures employed for that end. This last statement is of great practical importance, and will be referred to in another connection. If the predisposition be wanting, persons are insusceptible to the special cause of pulmonary phthisis. However large the number of bacilli inhaled, they are powerless, like the separated blade of a pair of scissors. If the predisposition exist, phthisis will be developed, unless the inhalation of bacilli can be avoided; and this, in most parts of the world, is impossible, so long as the disease is as prevalent as it now is. The susceptibility dependent on the predisposition doubtless varies much in degree in different persons, and at different times in the same person. The danger of contracting the disease, as it is reasonable to suppose, is proportionate to the degree of the susceptibility. It is also a rational supposition that the danger is, in a measure, proportionate to the degree of exposure to the contagion.

The views just presented are not peculiar in their application to tuberculous disease. The susceptibility to this disease, as shown by the results of inoculation, are far from being the same in all animals. It is great, for example, in rabbits, and comparatively slight in dogs. Some persons are insusceptible to the special causes of certain diseases, smallpox included. To certain of the contagious diseases the susceptibility is extinguished if the disease be once experienced. On the other hand, the occurrence of certain diseases (for example, relapsing fever), does not in the least lessen the susceptibility to their causes. Persons may be exposed many times to contagia or other special causes with impunity, the diseases becoming at length developed on exposure. In short, I have applied to pulmonary phthisis well-known truths as applied to other infectious diseases. These truths are novel, and may seem startling in their application to pulmonary phthisis, because, up to the present time, few physicians have been accustomed to look upon this disease as belonging among the infectious diseases.

I proceed to consider briefly the doctrine of the bacillus tuberculosis in its practical relations. In this division of the subject, we are to inquire into the relations of the doctrine to the diagnosis, prognosis, and treatment of pulmonary phthisis.

Of the importance of the bacilli in diagnosis, I can speak from personal knowledge. For several months I have obtained the results of examinations of sputa for bacilli in a large proportion of the cases which have come under my observation in hospital and in private practice. Not claiming to be a microscopist, it is proper to state that these examinations have been made either by my colleague, Prof. William H. Welch, or by my clinical assistant, Dr. William H. Flint, or by Dr. H. M. Biggs, Senior Assistant Physician of the Third Medical Division of Bellevue Hospital. The results taken in connection with the histories, the symptoms, and the physical signs, have satisfied me that the bacilli in the sputa may be relied upon as proof of the existence of tuberculous disease. There is abundant, competent testimony to the correctness of this statement. I am led to believe that, if repeated examinations, made with sufficient care, show the presence of the parasite, the diagnosis of phthisis is positive, and, on the other hand, if, on repeated and careful examinations, bacilli be not found, phthisis may, with much probability, be excluded. I return to predict that the time will soon come when, in order to corroborate the diagnosis, and as the hinge on which the question of diagnosis will turn in certain cases, microscopical examinations of sputa will be considered to be as much a matter of course as examinations of urine for evidences of renal disease. In cases of suspected phthisis, when the diagnosis is not rendered clear by physical signs, the presence or the absence of bacilli in the sputa will serve to determine either that the disease exists, or that it may be excluded. I could cite many cases which have been under my observation, in illustration of the value of this criterion of pulmonary phthisis.

So far as my experience goes, an abundance of bacilli in the sputa of phthisical patients is evidence of active progress of the disease, and *vice versa*. I am prepared to believe that in the number of bacilli found on repeated examinations, we have important data for forming a judgment in relation to prog-

nosis. I have been much interested in the study of some cases of lesions incident to advanced phthisis, as shown by physical signs denoting solidification of cavities, in which bacilli in the sputa were few or wanting. The results of the microscopical examinations of the sputa in these cases, corresponded with the history and symptoms in showing that the tuberculous disease had ceased, and that the patients suffered only from the lesions resulting therefrom. The bearing of this fact on prognosis is obvious. We may hope for the recovery, or at least, an indefinite prolongation of life in cases of phthisis in which the lungs are considerably damaged, provided the tuberculous processes of disease have ceased. I have enunciated in different publications the conclusion based on my own clinical studies, that pulmonary phthisis is a self-limited disease. The parasitic doctrine is in full accord with this conclusion. After a series of successive generations, the race of bacilli becomes extinct, probably because the local conditions for further multiplication no longer exist. In this regard, the tuberculous affection resembles other infectious diseases.

Lastly, the relations of the doctrine of the bacillus tuberculosis to the prevention and treatment of pulmonary phthisis, are the most important of the practical aspects of the doctrine.

The prevention of the disease can be effected by the accomplishment of either one of two objects, namely: First, avoidance of all exposure to the contagium; and, secondly, the removal of the concurrent, coöperating conditions in which consists the diathesis, the predisposition, or the susceptibility.

The first of these objects is not easily accomplished. Wherever there are cases of phthisis, the respired atmosphere may contain bacilli. We may be at this moment inhaling them if, among this audience, there are persons affected with phthisis. If there be a spot on the globe where there is not, and has never been, a case of phthisis, in that spot a person—no matter how great may be the predisposition—is safe. But where among the places in which persons may wish to live is such a spot to be found? It is evident that prevention by this method cannot be reduced to a degree approaching to certainty. Perhaps as safe a situation as any, exclusive of uninhabited regions, is on shipboard, provided it is certain that all others on board are free from phthisis. But we cannot enjoin on healthy persons to spend their lives at sea, especially inasmuch as we have no positive criteria of a tuberculous predisposition prior to the development of phthisis.

Preventive measures, moreover, relating to this object are not to be ignored. Assuming the existence of a tuberculous predisposition, there may be more or less exposure to the contagium, and the disease be not developed, the bacilli failing to become colonized. Exposure to the contagia of other diseases, or to infectious matter multiplied outside of the body, is by no means always followed by infection. Danger of infection is, of course, other things being equal, proportionate to the degree and duration of exposure. Hence, preventive measures, in this direction, are to be employed as far as practicable. Healthy persons should not occupy the same bed with phthisical patients, nor the same room at night, unless the dictates of duty, humanity, or affection, require that the risk of infection should be incurred. Sanitaria for phthisical patients and situations considered as favorable for those patients, should be avoided by those who are not tuberculous, in their choice of health resorts. The disinfection of sputa from phthisical patients by some simple but effective means is to be recommended. The freest possible ventilation of rooms or hospital wards occupied by phthisical patients should be secured. It is probable that not a little can be accomplished, in the way of prevention, by proper attention to these points.

The prevention of phthisis by the removal of the predisposition is a more available method. Here we labor under the difficulty of not being able to recognize with positiveness, by any criteria as yet ascertained, the existence of the tuberculous predisposition. Its existence should certainly be suspected if brothers or sisters have died with phthisis, and whenever there is reason to suppose that the predisposition may be inherited. Especially are preventive measures in this direction to be employed during the period of life when the disease is most apt to be developed, namely, from twenty to thirty years of age. Evidently, if preventive measures be practicable, it is far better to be oversuspicious of the tuberculous predisposition than to err in not having suspicion sufficiently aroused.

Ignorance of the particular conditions which constitute the predisposition to phthisis, is to be confessed, and we must, therefore, be guided by the lessons of experience and of common sense in the endeavors to remove this predisposition. These lessons teach that a dry, salubrious, uniform climate, the atmosphere rarefied by altitude, ample alimentation, life in the open air, a fair proportion of muscular exercise, protection of the surface of the body from cold, and cheerful spirits, are measures to be relied upon for this object. The measures, in other words, are those which tend to produce the highest grade of constitutional vigor. It is certain that the prevalence of phthisis would be greatly diminished by these measures; and if every member of the human family could be made to enjoy in the utmost degree the blessings of hygiene, who knows but that, in the course of time, the complete extinction of this disease might be included among the triumphs of preventive medicine.

The treatment for the arrest of pulmonary phthisis has reference to two objects: first, the destruction of the parasite, and, second, the removal of the conditions on which it depends for its existence.

Although not quite two years have passed since the announcement of Koch's discovery, many experimental observations have been made with a view to discover an effectual parasiticide which will destroy the bacilli by direct contact, either by means of inhalation, or by introduction into the circulatory system. Various substances which are known to be destructive to micro-organisms outside of the body, have been employed, such as corrosive sublimate, iodoform, bromine, arsenious acid,

salicylate of soda. Thus far they have proved ineffectual.[1]

There are three difficulties in the way of success by means of inhalation. The first is to discover the particular parasiticide. This difficulty applies alike to both methods of effecting the destruction of the parasite by direct contact. Of the different infectious diseases supposed to depend on the presence of micro-organisms, each has its own parasiticide. Mercury, for example, is an effective agent in cases of syphilis, but it has no effect upon malarial disease; and the specific agent for the latter is without effect in syphilis. For most of the infectious diseases, the specific curative agents remain to be ascertained. The second difficulty in the way of the direct destruction of the parasite by means of inhalation is, that the agent for its destruction, inhaled in the form of either an impalpable powder, a vapor, or a gas, is not likely to reach the colonies of bacilli in sufficient quantity to effect the object. The third difficulty is, that a parasiticide brought into direct contact with the bacilli by means of inhalation, in sufficient quantity to destroy them, is likely to injure the tissues, or, by passing into the blood, to induce toxæmia.

The two last-named difficulties do not apply to the introduction of parasiticides into the blood. It remains to be ascertained by experimental observations which, as yet, are but commenced, whether a parasiticide can be found capable of effecting the first object in the treatment, namely, the direct destruction of the parasite, by means of either its inhalation or its introduction into the circulation. That this object may be effected, is by no means beyond the limits of possibility, nor, perhaps, of probability. For this we must wait patiently. Meanwhile, the second object in the treatment, namely, the removal of the conditions on which the parasite depends for its existence, is not to be overlooked, nor undervalued.

Let it be borne in mind that the continuance, as well as the origin, of pulmonary phthisis, depends on two factors—the presence of bacilli and the concurrent, coöperating conditions. The disease will cease to progress whenever either factor ceases to exist. Without the conditions just named, the generation of bacilli must end. Without bacilli, there can be no tuberculosis. The bacilli are destroyed by removing the conditions on which their existence depends, as surely as by an effective parasiticide. Applying, in the plural number, the language of Shylock, "you take their lives when you do take away the means by which they live." The measures for the removal of these conditions are precisely those pertaining to hygiene, which enter into the preventive treatment, and they need not be here recapitulated.

[1] MM. Parrot and Martin have reported in the *Revue de Médecine* (Nos. 9 and 10, 1883) the results of experiments with a view to discover a parasiticide which will be effectual without injuring the tissues. They found that salicylic acid, sulphate of quinine, corrosive sublimate, carbolic acid, creasote, bromine water, and peroxide of hydrogen, in quantities suitable for administration, have no influence on the bacillus. *Vide* THE MEDICAL NEWS, December 22, 1883.

In conclusion, I will summarize an estimate of the pathological and practical relations of the doctrine of the bacillus tuberculosis, at the present moment, by quoting the concluding paragraph of another article:

"The researches of Koch and others have extended our knowledge of the pathology and etiology of pulmonary phthisis. Their practical bearings on diagnosis and prognosis are important, and they have opened up inquiries in relation to prophylaxis which may lead to useful results. But, as regards hygienic and medicinal agencies in the treatment of the disease, we have thus far acquired nothing beyond the rational views and the lessons of experience by which physicians were guided prior to the discovery of the bacillus tuberculosis. These views and lessons remain unaffected by the discovery. In the adaptation to individual cases of phthisis, of remedies, diet, regimen, and climatic changes, we are to continue in the endeavor to judge by the light of reason and experience; and it is not less a duty now than heretofore to accumulate facts which have practical bearings, irrespective of any doctrine."[1]

FATAL CASE OF PERITONITIS,[2]

CAUSED BY PERFORATION OF THE APPENDIX VERMIFORMIS, DUE TO THE LODGEMENT OF A CONGLOMERATE MASS OF SMALL SEEDS.

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ON Friday, October 5, 1883, I was called in consultation with Dr. W. T. Leachman to see a young girl about 13 years of age, who, on the preceding Monday, while at the Exposition, had been suddenly seized with pain in the abdomen, located in the right inguinal region. Upon reaching home she had been put to bed and given a dose of castor oil. The next day Dr. Leachman was called in, and found her with slight fever, the temperature being 99.5°, the pulse rapid, and the respiration quickened and almost entirely pectoral. The pain was excruciating and could only be relieved by large and frequently repeated doses of opiates.

In answer to inquiries as to the possible cause of her sickness, she stated that five or six weeks previously she had swallowed a copper coin, and though she had watched closely her actions since, she had failed to find it. It was thought that possibly the coin might have lodged in some fold of the intestine, and, ulcerating its way through the walls, caused the peritonitis. A large poultice, covered with oil-silk, was applied over the entire abdomen, and opiates given in sufficient quantity to relieve the pain.

When I saw her on Friday there was considerable tympanitic distention of the abdomen, with great tenderness over the entire surface, more noticeable

[1] *Vide* Appendix to A Treatise on the Principles and Practice of Medicine, by the writer. Fifth edition, 1883.

[2] Read before the Medico-Chirurgical Society.

in the right inguinal region, and there was dulness on percussion over an area three or four inches in diameter in the same locality. There was evidently general peritonitis most intense over the right side of the abdomen. The poultice was continued, opiates given in sufficient quantities to relieve pain, and every effort made to administer nourishment, both by the stomach and rectum. She was able to retain very little nutriment, and continued to grow worse until Monday night, just eight days from the time she was taken sick, when she died.

On Tuesday night, twenty-four hours after death, we made a post-mortem examination of the abdomen, no other portion of the body being opened. The intestines and mesentery were found extensively matted together by inflammatory lymph of recent formation. Douglas's cul-de-sac was filled with a purulent collection, and there were several collections of pus found in the neighborhood of the cæcum. The vermiform appendix was carefully examined, and upon withdrawing it two small ulcers were discovered about one inch from the extremity, which communicated with the cavity, and which had no doubt allowed the escape of fecal matter into the peritoneal sac. Near these openings was found in the appendix a small hard mass which, upon removal, looked like a cherry-seed. Subsequent microscopic examination of it by Prof. Holland and myself revealed it to be a collection of small seeds, as of the blackberry or strawberry, matted together into a hardened mass. This mass, or one like it, was no doubt the cause of the inflammation. A careful search in the entire course of the intestinal tract was made for the copper coin without discovering any trace of it. It had, in all probability, been passed without her knowledge.

This case illustrates very clearly the fact, that there may be greater danger in eating blackberry or strawberry preserves than in swallowing cherry-stones, peach-stones, or coins.

MEDICAL PROGRESS.

BACILLI OF CHOLERA INFANTUM.—At a recent meeting of the Berliner Med. Gesellschaft DR. A. BAGINSKY made a report on the bacilli of cholera infantum, which he has found both in the dejections and in the intestinal mucous membrane. In the dejections, along with numerous other micro-organisms, Baginsky found masses of zoöglœa, whilst the Peyer's patches in the upper part of the small intestine were filled with microbes containing bacilli, the wandering of which into the submucous tissue could be frequently recognized. Here, also, the zoöglœa masses could be made out as well as in the dejections.—*Allg. Wien. mediz. Zeitung*, Nov. 6, 1883.

NAPELLINE IN FACIAL NEURALGIA.—M. GROGNOT has recently reported an interesting case showing the efficacy of napelline in facial neuralgia. The case was that of a young girl who for three years had had violent periodic facial neuralgia, though independent of menstruation. Aconitine was tried repeatedly, and failed to give permanent relief. Finally, napelline was administered in pills containing one-thirtieth of a grain, ten pills being given daily. After a few hours the pain disappeared. Two months later another attack was successfully treated.

It is well known that amorphous aconitine is more often successful than the crystalline. This is due, says Grognot, to the fact that the napelline contained in the amorphous variety has been removed from the crystalline.—*L'Union Méd.*, December 6, 1883.

INFLUENCE OF QUININE ON HEAT-PRODUCTION AND HEAT-LOSS.—While Binz, Naunyn, and Quincke concluded from their observations that the antipyretic action of quinine is due to a diminished production of heat, Wood has recently asserted that after the administration of quinine there is an increased loss of heat, amounting to about sixty per cent., and, at the same time, an increased heat-production of about forty-three per cent.

H. ARNTZ has still more recently (*Pflüger's Archiv*, xxxi. S. 531) investigated the subject on normal and fevered rabbits, and draws the following conclusions:

The use of quinine has, with few exceptions, no influence on the loss of heat through the skin. In rabbits with septic fever there is a considerable decrease of oxygen consumption, and when immersed in a bath of the temperature of the body all loss of heat ceases. This is not observed in the case of non-fevered animals. *Centralbl. f. d. med. Wissensch.*, November 24, 1883.

THE COUVEUSE, OR ARTIFICIAL NURSE.—This apparatus was introduced into the Maternité at Paris, by Tarnier, in 1881. It is composed of a wooden box, the walls of which are about four inches thick, and filled in with sawdust. The box rests upon a pedestal. The height of the whole couveuse is thirty-eight inches, length twenty-eight inches, depth thirty-four inches. It is divided into two compartments by a central division. The lower compartment contains warm water; the upper is for the infant. The metal case holding the warm water almost entirely fills the lower compartment. Between the walls of the box and the metal case is a free space for the circulation of air, which enters from the bottom of the apparatus, and, after circulating, escapes through apertures in the top.

The infant is placed in the upper compartment. It is separated from the water-tank by an air-space, and communicates with the exterior by two openings, one for the escape of air, the other for removing the infant when necessary.

A thermo-siphon is attached to the water-tank, which heats the water by a spirit-lamp. The temperature is determined by placing a thermometer by the infant. The water is removed by the stopcock at the bottom, and introduced through the upper tube leading from the thermo-siphon. The temperature is kept at a mean of 86° F. Dr. Budin has attached an electric alarm, in case the heat becomes too great.

At the Maternité the infant is generally placed under the care of a nurse, as the mother is usually in another ward. When the infant is born before term and is very feeble, it is fed on pure asses' milk, from a spoon or glass. The infant is clothed just as other nursing infants. The linen is changed five or six times a day, and a daily bath is given.

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OÖPHORECTOMY AND HYSTERECTOMY FOR UTERINE FIBROMATA.

AT the recent Congress of German Naturalists and Physicians, held at Freiburg, as we learn from the *Archiv für Gynäkologie*, Bd. 22, Heft 1, 1883, DR. WILDOW read a paper on "Castration for Uterine Fibroids," in which he gave the statistics of 66 operations, with 12 deaths, or a mortality of 19 per cent. Of these, Lawson Tait lost 5 out of 26, and Hegar lost 5 out of 21. In the discussion which followed, Freund stated that he had had 6 cases, with 1 death, and Müller, also, reported 6 cases, with 1 death. In the majority of the cases in which the result was known, the bleeding soon ceased, and the menopause and the diminution in the size of the growth soon set in. In several instances the menses continued, a fact that had been observed by Schatz after double ovariotomy.

In a paper contributed to the *Transactions of the American Gynecological Society*, vol. vii., 1883, Mr. J. KNOWLSEY THORNTON discusses the relative value of hysterectomy and oöphorectomy for the cure of uterine fibroids, and he refers to 76 cases of the latter operation, with a mortality of 15, or 19.73 per cent. If, however, the death-rate be based upon the results of surgeons who have had the most experience, it will be found to be greatly decreased. Thus, Tait has had 38 cases, with 33 recoveries; Hegar, 21 cases, with 16 recoveries; Savage, 14 cases, with 14 recoveries; Thornton, 8 cases, with 8 recoveries; Freund, 6 cases, with 5 recoveries; and Müller, 6 cases, with 5 recoveries. In other words, 93 cases in the hands of skilled operators afford 81 recoveries, and 12 deaths, or a mortality of 12.90 per cent. Of 221 hysterectomies, on the other hand—under which procedure are included all cases in which the uterine cavity is laid open, and more or less of its wall removed along with the fibroid, with or without excision of one or both of the ovaries—performed by Péan, Sir Spencer Wells, Billroth, Thornton, Bantock, Koeberlé, Schroeder, Hegar and Kaltenbach, Savage, and Thomas, 131 recovered, and 90, or 40.72 per cent., perished.

Having thus shown that oöphorectomy is attended with far less risk than hysterectomy in the hands of practised surgeons, Mr. Thornton asserts that supravaginal hysterectomy in the class of cases under consideration still remains a most formidable operation, and subjects the patient to the risk of ventral hernia. That this operation, which includes the removal of the tumor, the uterus, and the uterine appendages, is a most grave one cannot be doubted; but that it is not formidable to one thoroughly skilled in abdominal surgery is shown by the wonderful experience of Dr. Thomas Keith, which may be found in the *British Medical Journal*, for December 8th. Of 25 supravaginal hysterectomies performed by this surgeon during the past ten years, only 2 were fatal, and the success is the more astonishing when we learn that all but three were hospital cases. The average weight of the tumors was seventeen pounds; seven of the cases were most trying and difficult to complete; and the bladder had to be dissected off in not less than six. All of the 23 women who recovered enjoy excellent health, and in not a single one is there the slightest approach to a hernia. And yet, despite these unparalleled results, this modest, honest, preëminent surgeon in his branch, thinks that his death-rate can be reduced.

The mere removal of the ovaries does not always entirely stop menstruation, or the growth of the tumor. Mr. Thornton, in his comments upon the failures, states that, in addition to the excision of the ovaries, the dilated tubal and ovarian arteries and veins must be tied to insure success. Unless the chief blood supply be cut off the operation may fail. The uterine arteries are seldom very large; they are difficult to get at, and in tying them there must be great danger of including the ureters. So great is his belief in the arrest of the chief blood supply being the important factor in the cure, that he should in the future prefer oöphorectomy with ligation of the vessels to enucleation through the vagina for intramural and submucous tumors, unless they are already becoming exposed by thinning or necrosis of the mucous membrane.

It is to be regretted that Dr. Keith has not entered fully into the details of his manner of operating. Most of his operations were extraperitoneal, that is, the stump was secured outside of the belly by a very large clamp. He finds Kœberlé's instru-

ment most useful in half extra- and half intraperitoneal cases. The broad ligaments were almost always separated off the tumor and tied separately. Extensive enucleation was often necessary in order to place the wire as low down as possible when there was no cervix. As the bladder often rises as high as the umbilicus, and as it is not always easy to distinguish its edges, if the "stupid direction be followed that it be emptied before the operation is begun;" it should be left full. In his operations the carbolic spray is discarded.

THE DWIGHT INSURANCE CASE, AGAIN.

IN the interesting review of the Dwight insurance case, which appeared in our last number, from the pen of Dr. H. C. Wood, we find nothing to alter the opinions given in a former issue (December 22). Even the unanimity with which experts for the defence adhered to the opinion that Dwight died from strangulation, effected by a cord around his neck, does not shake our convictions, and their consistency in adhering to the opinions once formulated does not necessarily increase our confidence in their accuracy. Consistency is a jewel, most truly; but the moral courage necessary to change opinions for the sake of truth is an altogether higher quality. We do not therefore sympathize with the felicitations on the constancy with which the experts adhered to their opinion.

Their uniformity of opinion, moreover, does not strengthen a fact which rests on individual judgment. This, Dr. Wood seems conscious of in the following observation: "If the facts sworn to by Dr. Swinburne are as he alleges, I can but reiterate my opinion expressed upon the stand, that there is no room for doubt as to the cause of death"—that is, by strangulation. It appears that the experts assembled by Dr. Flint in Philadelphia had all reached this conclusion, and from the same premises—the observations of Dr. Swinburne. With the exception of Dr. Wood, these experts, it further appears, did not give evidence at the trial, and they now disappear from the record.

With prepossessions in favor of Dr. Swinburne, and believing him quite incapable of any voluntary or designed misstatements, we nevertheless see in his testimony the evidences of strong partisanship. He saw an indentation in the neck, produced, as the undertaker testified before the Coroner's jury and at the trial, by bending the neck and by the pressure of the chin supports used. Dwight's neck was short, thick, and bearded. If we add to the effect of bending such a neck the sugillation, and the fixation of the parts by freezing, we have an adequate explanation of a condition which to a mind possessed with the idea of fraud, might appear to be produced only by a cord.

Those post-mortem conditions supposed to be due to death by strangulation, were referred by us to morphine poisoning; an opinion which was based upon a careful study of the sworn evidence given at the Coroner's inquest. The experts for the defence reply that the administration of morphine was not mentioned at the trial, and, therefore, should not figure in any review of the case. We have no purpose to subserve except the interests of the truth and independent journalism, and they demand that the facts in evidence, developed under oath at the Coroner's inquest, must not be ignored in the study of this remarkable case.

The claim that the testimony before a Coroner's jury is "confidential," is not entitled to serious consideration. In what year of grace did a Coroner's investigation assume the mysterious attributes of a Star Chamber Inquisition? A Coroner's court must, necessarily, in a free State, be entirely open and public; and, moreover, the facts there developed constitute "legal evidence" and a criminal is deprived of his liberty under its procedures.

If the testimony before the Court varies from that given before the Coroner, is not the credibility of the witness correspondingly injured? As a rule, if the mere facts of a case are sought for, they are to be obtained in a truer and fresher state from the Coroner's inquest, which is promptly held after the death. Later, in the process of "sifting" and case-preparing, in the partisanship, in the spirit of contest and desire of triumph, facts are modified and interpretations put on them not warranted by their original meaning. It is therefore important to get the facts from that period when they had not been tampered with by opposing counsel, or interpreted by partisan experts. In the testimony given before the Coroner, we find information regarding the influence of morphine in determining the fatal end of Dwight, and a further review of that testimony more than ever impresses us with the importance of morphine as a factor in the result.

On the day and evening of Dwight's death, he had taken somewhat more, it is probable, than three grains of morphine; the last dose administered hypodermatically, about two hours before death. As he had a singular insusceptibility to the soporific effect of morphine, it was given him in a lavish manner. He had declared that he could take it in any quantity, and that there need be no apprehension about giving it to him; hence the remarkable quantity administered on the day of his death, in anticipation of the supposed congestive chill, due on the following day.

That there was danger in the use of so much morphine, notwithstanding the apparent indifference of the nervous system, is shown in an experience of

his physician, who testified before the Coroner that on one occasion, Dwight falling asleep under the effect of considerable doses, "his breathing was hurried, and I had a little doubt in my own mind," *i. e.*, regarding the effect of the morphine. It is this action on his respiratory system to which we refer the unfortunate termination of the case. On the night of his death, and two hours before the end, Dwight had received a subcutaneous injection, and afterwards expressed himself as "comfortable," and disposed to sleep. Whilst his friend who watched sat reading, about two hours after this last dose, he heard a sound indicative of difficult breathing, and approaching, found Dwight in the agony of death, from respiratory failure.

Any one familiar with the action of morphine when given subcutaneously, will recognize in this one of the modes of dying from this agent. Those, of course, who have no other conception of morphine narcosis than stupor and slowly failing respiration, may find it difficult to appreciate a termination in which respiratory spasm and paralysis are coincident. The cases in which death ensued in the mode here described are, unfortunately, too numerous to permit of doubt.

DIPHTHERIA AND PSEUDO-MEMBRANOUS SORE THROAT.

THE practitioner of ordinary experience soon recognizes a decided difference between that grave constitutional disease known as diphtheria, in which a false membrane starts at one point and extends in various directions, and a form of angina also accompanied by high fever and painful deglutition, to which are added one or more white patches, mostly on the tonsils. These, however, do not spread, and within seventy-two hours generally drop out, leaving a clean depression, which rapidly disappears. Coincidently with the disappearance of the white patches, the fever and other constitutional symptoms decline and recovery is rapid.

It is well known, too, that some physicians are in the habit of terming this latter condition diphtheria, and acquire not a little ill-founded reputation among their immediate adherents for invariable success in the treatment of this fell disease, although they have had to do with a harmless local condition, often accompanied, it is true, by disproportionately intense general symptoms, but which would have disappeared without treatment in a couple of days.

What, however, is this circumscribed, white, circular patch, a quarter to a third of an inch in diameter, which at the end of forty-eight hours drops out and leaves the clean, punched-out cavity referred to? It consists of the mucous membrane, including its epithelial and subepithelial layers, infiltrated with white blood-cells, cemented by coagulated fibrin, and permeated by countless bacteria. It is, therefore, from the standpoint of morbid anatomy and pathological histology, false membrane in the strict sense of the word, as much as the false membrane of true diphtheria and croup. At the same time, it is evident that the disease is not the constitutional affection known as diphtheria, but contrasts strongly with it in its purely local nature, its harmlessness, its curability, and short duration. It is evident, too, that we have no name in medical terminology so definitely associated with this condition as to make it invariably evident to all readers and listeners what is meant.

The terms acute follicular tonsillitis, ulcerated sore throat, and diphtheritic sore throat, have all been used to describe it. It has also been called *herpes* and *eczema tonsillaris*. Were it certain that one of these white spots always encircles a follicle of the tonsil, as it often does, and as is proved by the presence of a minute hole in its centre, the first term would be perhaps the best. But this is by no means invariably the case. The term ulcerated sore throat is unsatisfactory because it does not indicate the local peculiarity. With regard to the last-named title, while the tonsils are subject to the same vesicular or pustular inflammations as the cheeks and gums, resulting in the painful gray ulcers, surrounded by red areolæ, with which we are all familiar, these ulcers are very much more rare on the tonsils, and the process is not that to which we allude.

The term diphtheritic sore throat, as distinct from diphtheria, is objectionable because it suggests an alarming and dangerous constitutional disease, the mere idea of which is sufficient to excite a panic. This objection cannot be made to the term pseudo-membranous sore throat, while the scientific accuracy of the term cannot be questioned. There is a sore throat—a tonsillitis and a pharyngitis—but along with this is a condition, which morbid anatomists the world over have agreed to call a diphtheritic or croupous exudation, the result of a circumscribed, intense inflammation, which is distinguished from the catarrhal inflammation which accompanies it by this patch of false membrane.

It appears, therefore, that the term pseudo-membranous sore throat should be adopted, and we should teach our patients generally, what many of the more intelligent ones already know, that there is a vast difference between diphtheria and pseudo-membranous inflammation; that the former is a general disease with a local product, and that the latter is a mere local disease with a local product, which, although identical in structure with the former, has a very different significance.

PERMANENT CATHETERISM OF THE ŒSOPHAGUS.

KRISHABER, of Paris, in a paper read at the International Medical Congress, 1881, recommended that in carcinoma of the œsophagus, a soft tube be passed, through the obstruction by way of the nares, and be permanently retained, for the double purpose of feeding the patient and inducing dilatation of the contraction. That the suggestion was a most happy one, was demonstrated by two cases in which the patient was nourished, respectively, for one hundred and sixty-seven and three hundred and five days by this method of treatment.

In a discussion on the management of malignant stricture of the œsophagus, which took place at the Clinical Society of London, in 1881, MR. DURHAM narrated a case in which a tube had been retained for four months, and the patient was doing well. In vol. xii. of *St. Thomas's Hospital Reports*, which has just been issued, MR. CROFT again calls attention to the subject, and gives the details of two cases in which life was prolonged, respectively, for one hundred and eight, and one hundred and forty-nine days. In the latter, indeed, the subject might have survived some weeks longer had the tracheotomy-tube, which had been worn for seventy-three days, been sufficiently long to reach below the level of the growth which was pressing on the windpipe.

The five cases to which we have now referred, show conclusively that the œsophagus tolerates a tube indefinitely, and that alimentation by this means insures a prolongation of life, which it is too generally thought is attainable only by operative interference. More than this, not only is the procedure a perfectly safe one, but it preserves life much longer than cutting measures, the average existence of the five cases having been one hundred and seventy days, and is a far better result than has been afforded by gastrostomy, œsophagostomy, or internal œsophagotomy. Hence, when the œsophagus is pervious to a tube, this method of treatment should be tried before an operation is resorted to.

The early use of the permanent tube for alimentation is also indicated in cicatricial stricture of the thoracic portion of the œsophagus which resists dilatation with bougies, as well as in cases of compression of the canal by an enlarged thyroid gland, mediastinal glands, or carcinoma of the larynx. Whatever the cause of the trouble may be, a tube of medium size, say No. 17 or 19 of the French scale, should be selected, and be carefully and patiently passed, when it may be retained by a strip of plaster across the cheek. It should be changed every four or five days, and should be rendered aseptic before reinsertion to prevent the conveyance of putrefactive agents into the stomach. As the introduction of a tube by the mouth is far easier than by the nose, the former route should be preferred for a few days, or until the œsophagus has become accustomed to its presence, when it may give way to the latter, which is attended with less discomfort to the patient.

CONGENITAL DISPLACEMENT OF THE HEART.

AN interesting report on a case of congenital displacement of the heart has recently been made to the Academy of Medicine of Paris, by a commission composed of MM. Marey, Sappey, and Vulpian. The subject was a woman, and was the second which has been thoroughly studied in France. There was diaphragmatic hernia, the heart projecting through an opening in this muscle, and protruding under the skin of the epigastrium, where it could be seized with the hand.

The result of the examination is to confirm the prevailing views of the phenomena of the heart's action as determined by the study on animals. Thus it is proved that the impulse of the heart is systolic in time, and not diastolic, as was formerly claimed by many, and is still held by a few clinicians. It was also ascertained that, whatever be the derangement of rhythm, the two ventricles always coincide in their contraction. Such derangement was produced in the patient by emotional causes in a prolonged examination. The only difference demonstrated in the two ventricles was in the force of contraction, that of the left being of course the more energetic.

The position of the heart behind the sternum did not permit the accurate study of the auricles as compared with the ventricles. This was, however, done in a second case examined by MM. Paul and François-Franck, in 1877, wherein it was noted that the auricular systole immediately preceded the ventricular, which is also a confirmation of the results of the delicate experiments by Chauveau and Marey upon animals.

The confirmation, afforded by these rare cases of malposition, of the results of experimentation upon animals, adds another to the many reasons for continuing this practice, to which we are indebted for so much of our accurate knowledge in physiology.

THE NEW YORK COUNTY MEDICAL ASSOCIATION.

A LARGE number of the profession in the city of New York, desiring not to be misrepresented by the action of the Medical Society of the State of New York, and of the Medical Society of the County of New York, in reference to the Code of Ethics, have organized a new society under the title of "The New York County Medical Association," and have made the National Code a part of their by-laws. They have thus formally placed themselves in affili-

ation with the profession throughout the United States, and its representative body—The American Medical Association.

The first meeting of the new society was held last Monday evening under the most auspicious circumstances. There was a large and representative attendance, and the scientific work was inaugurated by an extremely valuable paper by Dr. Austin Flint, Sr., on the pathological and practical relations of the doctrine of the bacillus tuberculosis, which we have the pleasure of laying before our readers in full in this issue.

The new society will enjoy the confidence and best wishes of the profession throughout the country.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 11, 1883.

THE PRESIDENT, ROBERT F. WEIR, M.D., IN THE CHAIR.

TRANSVERSE WOUND OF EXTENSOR TENDON OF FINGER; SUTURE.

DR. A. C. POST presented a patient with the following history:

November 3, 1883, George Moore, aged nine years, was brought to my clinic, with the index finger of his left hand flexed at a right angle at the articulation between the first and second phalanges. The patient had no power of extension, although there was no rigidity of the articulation. There had been a transverse incision over the back of the joint five weeks before. The external wound had healed. I made a free longitudinal incision over the dorsal surface of the finger, and found the tendon divided transversely throughout nearly its whole breadth, there being a very narrow strip undivided on each side. The proximal end was full and loose, the distal end was somewhat atrophied, and adherent to the periosteum. I excised the margin of the opening, and then brought the divided ends together with fine sutures, after which I secured the finger in a position of exaggerated extension to a dorsal splint passing over the hand and forearm.

10th.—I dressed the wound, removed the sutures, and found the external wound almost perfectly united.

December 8.—On removing the dressings, I found the finger straight, and the patient had the power of flexion and extension. I did not, however, allow him to make extensive movements.

NEURALGIA OF SECOND BRANCH OF THE TRIGEMINUS.

DR. F. LANGE presented a patient, about forty years of age, a tailor, who suffered from neuralgia of the second branch of the trigeminus on the right side, which resisted for a long time the usual external and internal remedies and applications, until finally the patient submitted to an operation, which was performed in March, 1882, after the method of Leucke, modified by Braun and Lossen, and consisting in an osteoplastic resection of the zygomatic arch and bone, and finding the nerve in the depth of the spheno-maxillary fossa, at its exit from the skull, and besides a separation of the nerve at its exit from the infraorbital foramen, and extracting the anterior piece from the base of the skull to this point. He was unable to destroy the spheno-palatine ganglion, and so far the result had been permanent. Anæsthesia followed the operation immediately, and was complete also on the corresponding side of the palate. The patient at present has a certain kind of formication, which he describes like the crawling of worms, but has no real pain. The operation was performed by making a horizontal incision along the upper edge of the zygomatic arch, extending to the external angle of the orbit, and then a perpendicular one downward over the base of the zygoma, and with a fine saw separating the zygoma from its attachment to the superior maxilla, directing the saw so that the blade is more parallel to the sagittal plane, in order to prevent subsequent disfiguration through depression of the separated bone.

Then by bone scissors the arch was cut across half an inch in front of the meatus auditorius externus. This triangular flap of skin and bone was pulled downwards, and then the spheno-maxillary fossa laid open, the temporal muscle drawn backward, and the nerve found after some adipose tissue had been pulled aside or removed. In the patient presented, the operation did not offer any peculiar difficulty; but Dr. Lange presumed that it was probably on account of his lack of fat, and could readily conceive that sometimes in stout, fleshy persons the operation might be very tedious. He was able to see the internal maxillary artery, but had no disagreeable interference by hemorrhage. The wound healed entirely by first intention, and, as an accident, the rubber drainage-tube was healed in. After a time, the tube was cut out. The result, so far as disfiguration went, was rather gratifying, and also with respect to the recurrence of the disease. Dr. Lange did not think that any other operation afforded the possibility of excising the nerve to so great an extent and with so little danger and disfiguration as the one described. For some time the patient had slight difficulty in opening his mouth in consequence of inflammatory contraction of the temporal muscle, but at present he has no difficulty which prevents him from taking his food, though the excursions of the jaw are not normal yet. The little wound by which the nerve was exposed at its exit from the infraorbital canal had hardly left a visible scar.

DR. BRIDDON asked what objection there was to performing the anterior operation first, and reserving the more extensive operation in the spheno-maxillary fossa for a return of the disease.

DR. LANGE said that he did not regard the operation as a severe one.

DR. BRIDDON remarked that he saw the more extensive operation performed several years ago, and it was exceedingly tedious and very unsatisfactory, as he thought. He was unable to state what the result was.

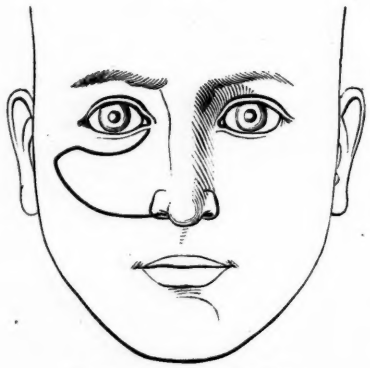
DR. A. G. GERSTER then read a paper on

OSTEOPLASTIC RESECTION OF THE UPPER JAW FOR PROSOPALGIA, WITH THREE CASES.

Total extirpation of the upper jaw, as a preliminary measure for facilitating the removal of massive nasal

polypi, was first successfully done by Syme, in 1832 (*Ninth Report of the Edinburgh Surgical Clinic*), and having been adopted by the then reigning French school of surgeons, remained the standard measure in the operative treatment of the above-mentioned disorder. The happy idea of a more conservative procedure was first conceived, and successfully executed by von Langenbeck, in the year 1859 (*Deutsche Klinick*, 1859, p. 471), when he extirpated a large retro-nasal polypus through an aperture made by what he designated an osteoplastic resection of the nasal process of the superior maxillary and the os nasi. The ease afforded in the removal of the polypus by this step, and the primary healing in of the resected parts led to further trials, and, in 1861, another more extensive and also successful case was reported by von Langenbeck in the *Deutsche Klinick* (1861, p. 281). This case consisted in the temporary removal of the superior portion of the upper jaw, without injuring the hard palate, the alveolar process, or the velum palati, followed by the excision of a large fibroid of the pterygo-palatine fossa. The steps of the operation were as follows: A curved incision, its convexity looking downward, commenced in the nostril, and extended outward and upward to the middle of the malar bone, the periosteum being divided at one stroke. The masseter was cut away from the edge of the zygomatic arch, and the buccal fascia was divided. The lower jaw was now drawn aside, and the tip of a keyhole saw being introduced into the pterygo-palatine fossa, the upper jaw was sawn through horizontally above the alveolar process, the cut through the bone following the line of the cutaneous incision to the nostril. A second incision, commencing at the nasal process of the frontal bone, was carried outward along the lower margin of the orbit, to join the first incision at the middle of the malar bone. Now the orbit was entered, and the eye-

FIG. 1.



Showing the cutaneous incision.

ball pushed up; then the frontal process of the malar and the zygomatic process of the temporal divided; finally the orbital plate of the superior maxillary severed transversely as far as its junction with the lachrymal bone. Thus, the resected jaw remained attached by skin and periosteum only to the nasal bone and the nasal process of the frontal bone, and could be easily pried out of its bed by the aid of an elevator, the above-mentioned uninjured parts serving as a sort of hinge. The tumor was readily removed; the profuse hemorrhage ceased spontaneously, only one ligature, that of the spheno-palatine artery, being required. The resected parts were now replaced, some difficulty being met with in overcoming their tendency to protrude. Wire sutures and a compressory bandage finally effected this end. The cutaneous incision healed almost entirely by adhesion; the bone was found to be immovable on the eighteenth day after the operation.

The value of this truly conservative idea was soon recognized, the operation became well established, and was quite often executed by various surgeons in Germany.

The first one to widen the field of this procedure was Nussbaum, of Munich, who, in 1863, had to deal with an obstinate case of supra-infraorbital neuralgia, of traumatic origin (A. Fr. Bratsch, *Bayer. Intelligenzblatt*, 1863, p. 461, Case No. 13) in a woman of thirty-eight years. Numerous neurotomies of both the supra- and infraorbital nerves had been performed during the five years preceding her admission to Nussbaum's clinic. In the course of the subsequent two years the cicatrices were repeatedly excised without improvement; finally, the common carotid was deligated, the ascending ramus of the lower maxilla was trephined in order to permit of the exsection of portions of the inferior alveolar, the mental, the mylo-hyoid, and lingual nerves. This led to necrosis and removal of the ascending ramus, but produced a pause lasting five months, after which a relapse occurred, for which von Langenbeck's osteoplastic operation was performed, with temporary success, the observation not extending over more than a few months.

The adaptation of this operation to neurectomy did not attract any attention—at least found no imitators. Billroth, then of Zurich, having excised, in April, 1864, a piece of the infraorbital, one inch and a quarter long, in what he designated "the ordinary manner"—by which Malgaigne's method is meant—and the patient's sufferings not being alleviated, conceived the idea of exsecting the mentioned nerve from the foramen rotundum forward, by the aid of von Langenbeck's osteoplastic operation. He believed himself to be the first one who had thought of this plan; but on studying up the history of neurectomy, he found that Carnochan, of New York, had preceded him in carrying into effect a similar plan; and also Nussbaum, in executing the identical procedure which Billroth had thought of. Griesinger, who felt a personal interest in the patient, was deterred by the operation, and merely advised the removal of some sensitive portions of the corresponding alveolar process, which was done accordingly in May, 1864. The operation was followed by a quiescence of the attacks extending over ten months. The affection reappeared then, and in February, 1866, Billroth's original plan—osteoplastic exsection of the superior maxilla—was successfully performed, and the nerve was cut away close to the foramen rotundum. The operation can be done in an exact manner, without serious hemorrhage. The wound healed kindly. The exsected nerve was found to be fully regenerated, and in every respect normal. Meckel's ganglion was not removed. In the ensuing months of April and May, branches of the third division of the fifth pair became the seat of neuralgia, and required sections of the buccinatorius and mentalis nerve. In July, 1867, the common carotid was

deligated, with temporary benefit, this lasting till January, 1868, when another relapse drove the patient into Niemeyer's clinic at Tübingen, where the constant current again relieved him. Here the history stops.

From Billroth's case up to my three operations, no mention of the method as adapted to neurectomy is found in literature.

The late Professor Wagner, of Königsberg, in Prussia, devised the simplest and least incisive method by which the foramen rotundum can be exposed. He entered the orbit and laid bare its floor, then pried off the lamina of bone serving as a roof to the infraorbital canal; then, by a suitable hook, he raised the nerve out of its bed from alongside of the uninjured artery, and following it up towards the round foramen, cut away successively all its branches, and finally the trunk. The integrity of the antrum was thus preserved, yet phlegmon and erysipelas set in in almost all of Wagner's cases. This circumstance puzzled him a good deal, and he attributed it to neuro-paralytic influences. That the operation is difficult and unusually subtle, on account of the confined space, is evident. In cases of a narrow and deep orbit, or where the artery was unfortunately injured, it became almost impracticable, as one of Wagner's own cases (No. X.), König's case, and a third case demonstrated, which I had an opportunity to witness here in 1878. It must be conceded, however, that Wagner's final results, as regards the tardiness of the relapses, were very good.

The second method to be considered is that devised by Carnochan, of New York. It has its merits, but it labors under the disadvantage of also affording, in cases of a small proportioned facial skeleton, insufficient space for a sure removal of the entire nerve. Aside from the circumstance that a portion of the superior maxillary must be sacrificed in this method, it is undeniably excellent in suitable cases, and where a large trephine can be employed, it gives plenty of space and light.

As the third mode of procedure I have to mention Brun's plan of resecting the malar bone, dividing the muscles presiding over mastication, and thus approaching the nerve from the temple. It is in many ways unsatisfactory and mutilating, like Carnochan's operation, the wound is narrow and deep, and manipulation of the nerve very difficult. Yet a respectable number of cases have been operated on in this manner with fair success.

As an important modification of Brun's method, Leucke's procedure has to be mentioned, in which the malar bone is not sacrificed, but only temporarily exsected and turned aside, thus admitting the operator to the temporal and pterygo-palatine fossæ. Especially in the presence of a deep layer of adipose tissue and of large masticators, the wound must be very inaccessible.

As the fourth and last procedure, we have to mention preliminary osteoplastic resection followed by removal of the entire nerve. None of the preceding methods can compare with this as regards the space and light it affords, and the ease with which the infraorbital nerve can be removed in its entirety. It sacrifices no part of the superior maxilla, and, as statistics prove, is not more dangerous than any one of the preceding methods. With a few modifications, it deserves to be employed in cases not suited for Wagner's method, and merits further trial and development as applied to the alleviation of the terrible sufferings of prosopalgia. Advisedly, I do not use the word "*cure*," since love of truth compels me to admit that our ability to cure prosopalgia is just as uncertain as the knowledge of its pathology is unsettled and unsatisfactory.

The cases as observed by me were the following:

Case I.—Peter Deuker, æt. 36. His trade, that of an oven-builder, necessitates his frequently entering bakers' ovens to make repairs. On emerging from a very hot oven, he is liable to be exposed to sudden changes of temperature. He said that he had been suffering off and on for eighteen years. In 1877, neurotomy in front of the right supraorbital foramen was performed by a surgeon with temporary benefit. Large doses of quinine and salicylic acid also modified the attacks, inasmuch as they became shorter and less severe. In 1878, a remission of three months was brought about by a number of subcutaneous injections of one ninety-sixth of a grain of aconitine, repeated every two hours. At the end of this period mild attacks recommenced, first at long intervals, later more frequently; the hypodermic use of morphine was resorted to, until the patient had become a confirmed morphine eater. The attacks had become more frequent and more severe in spite of the anodyne, and his family attendant directed him to the Mt. Sinai Hospital, where he was admitted May 10, 1881. I found on a well-built frame a somewhat flabby skin and muscular system, the internal organs normal, the patient anxiously avoiding motions of the jaws. On the slightest provocation, such as articulation, chewing, swallowing liquids, or touching any portion of the cheek or lip, the patient's face became distorted and cyanotic, his left eye bloodshot with a copious flow of tears, and while his hands were pressed nervously to the anterior surface of the upper jaw, his body was bent low down, and a number of deep moans escaped his chest. The attacks lasted from thirty seconds to two minutes. There were two painful spots; one exactly over the left foramen infraorbitale, the other at the naso-labial junction. The teeth of the upper jaw were the seat of strong irradiating pain during the attack; the lower jaw and tongue were also somewhat affected this way; the palate was free.

Immediately on admission, treatment by the constant galvanic current was instituted, but did not produce any notable effect; hence, after forty-eight hours' preparation, an exsection was resolved upon, the anamnestic signs pointing to a neurosis, of a peripherical origin, the presumable seat of the affection being in front of the superior alveolar branch of the nerve-trunk.

In selecting the method by which this end should be accomplished, the difficulties encountered in a case of Wagner's operation, witnessed by me, were very vividly remembered. Flooding of the field by blood, soiling of the speculum—hence want of light and space, and especially the impossibility of actually following up and exposing to view the central end of the nerve situated between the foramen rotundum and the infraorbital canal, led me to abandon this method.

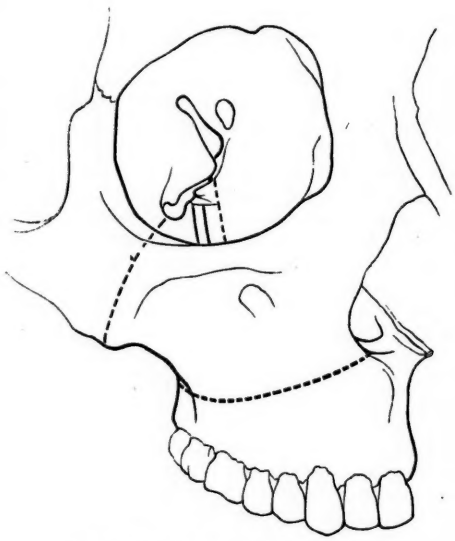
The objections to Brun's or Leucke's procedures were also great. The powerful masticators of the patient promised to give a good deal of trouble, causing a very deep wound, the possibility of injuring the internal maxillary artery in which, and the ensuing difficulty of dividing the nerve with any amount of certainty, caused me to abandon these methods also. Compared with Carnochan's operation, the temporary resection had the advantage of not mutilating, of giving decidedly

more space, and hence more certainty of accomplishing the chief end of the operation—that is, certain removal of the possibly longest piece of the nerve.

The circumstance that the method was not much tried as an aid to neurotomy was rather an incentive than anything else to new trial, and to a widening of our experience in the treatment of such an intractable disease as prosopalgia.

Accordingly, on May 12, 1881, the operation was performed, strictly after von Langenbeck, as far as the incisions are concerned, with one modification. In studying the bearings of the operation on the object in view, I found that the section through the frontal temporal processes of the malar bone could be advantageously substituted by a simple division of the middle of the malar bone. The injury would be lessened, and yet ample space would be afforded for attacking the nerve. In addition to this, the infraorbital foramen being exposed, the nerve was divided about two-eighths of an inch in front

FIG. 2.



Showing lines of section by the keyhole saw.

of it. In sawing through the superior maxillary, the hemorrhage was considerable, especially when the nasal mucous membrane was severed, but never alarming, and ceased spontaneously. No difficulty was encountered in turning the resected block out of its niche, and the nerve was seen to slip easily out of the infraorbital canal, and was lying at full length on the bottom of the wound. The alveolar and dental branches had been necessarily torn off. The trunk of the internal maxillary could be seen pulsating in the posterior part of the wound, covered by the periosteum stripped off the tuberosity of the maxilla. To expose the foramen rotundum fully, standing portions of the orbital plate of the maxillary bone had to be removed by forceps, then the nerve was grasped, and easily cut off close to the foramen. No ligature was required. The parts having been thoroughly mopped with an eight per cent. solution of chloride of zinc, were easily replaced, and the cutaneous wound closed with catgut sutures. A small drainage-tube was passed into the spheno-palatine fossa, leading out beneath the zygoma. No dressings were applied. Anæsthesia—by chloroform—was never full, except while the first incisions were made, and the blood entering fauces and larynx was readily expectorated. The length of the exsected nerve was one inch and seven-eighths; the time consumed, one hour.

On recovering, the patient at once touched his cheek, and was delighted at the absence of pain. Anæsthesia of the corresponding parts was present; the return of sensation was ascertained on the fifth day about the ala nasi, on the twelfth over the foramen. Bloody serum oozed out of the tube for about a week, then gradually the discharge became sero-purulent, and scanty, so that the tube was removed by the end of the second week. No fever and no local reaction followed, and the cutaneous wound healed by adhesion. The resected part had become immovable in the fourth week. The neuralgic attacks ceased immediately after the operation, and the patient was discharged from the hospital to resume his occupation. In the winter of 1882–83 slight attacks commenced to manifest themselves again, about once a week, the point of the most intense pain being the upper lip, near the ala nasi, and the irradiation to the teeth of both upper and lower jaws of the right side more marked than ever before. I directed the patient to a neurologist for treatment in May, 1883, but both medical and galvanic therapy proving quite futile, and the attacks gaining in violence, the patient implored me to relieve him by an operation. It seemed pretty certain that extensive regeneration of the nerve must have taken place, the dissection of which out of the cicatrix in which it needs must be embedded, promised to be a difficult task. Weighing all the circumstances, Carnochan's procedure seemed to promise most success, enabling me to expose the entire length of the infraorbital canal and Meckel's ganglion. Being readmitted, the patient was put under the influence of chloroform on June 16th, and a crucial incision exposing the foramen infraorbitale, a number of threadlike nerves were found to radiate from it. The antrum being opened by the aid of the trephine, the infraorbital canal was exposed, and a slender, irregularly shaped cord of varying diameter could be dissected out of it. The posterior wall of the antrum was broken out with a fine chisel, and Meckel's ganglion, together with the internal end of the nerve, was exsected with forceps and scissors. The removed cord proved to be composed of nerve tissue. To make sure of the destruction of the nerve as far as possible, the blunt point of a thermo-cautery was inserted into the foramen rotundum and the parts thoroughly seared. The patient recovering, complained of constant violent pain in the jaw, although the skin was found to be quite anæsthetic. In spite of a free use of hypodermic morphine injections, he spent a wretched night, the attacks being now more frequent and violent than ever, the intervals between them never exceeding five minutes. This gloomy aspect of the case continued till the discharge from the wound, which was lightly filled with iodoform gauze, commenced to be unmistakably purulent, which took place on June 19th. The highest temperature—100.5° F.—was recorded at this date, and the night was spent tolerably well, with two injections of morphine. The two nights following

the 19th were spent comfortably with the aid of one injection of morphine. On the morning of the 21st several sharp attacks were noted. Two more attacks came in the evening of June 22d, requiring an injection. Day and night of the 23d were spent painlessly and very comfortably, no morphine being required. The discharge from the deep part of the wound was purulent and copious, but the skin was never inflamed. From this time on the case did well, the attacks not returning. By July 16th there remained only a fistula, into which a probe could be still passed to a distance of two and an eighth inches. Very light formication, with tenderness, appears once in a while in the course of the second branch; lately the patient had some pain in the course of the third branch.

Case II.—Catharine Diemer, widow, æt. 42, admitted to the German Hospital, January 2, 1882. She is stated to have suffered from paroxysms of intense pain in the upper lip and the right alveolar process for two years, no cause for the same being known to her. She had all the teeth of the right upper jaw extracted one after the other, although they were sound. All this had no influence on her sufferings. The pain radiated into the ear; she never had had otorrhœa. She had been under treatment for three months in the German Dispensary for a circumscribed necrosis of the alveolar process of the second malar, undoubtedly due to the last tooth extraction. The sequestrum was removed when loose, and a fistula leading into the normal antrum was found. The alveolar process had become much atrophied, and was seen to be invested by normal mucous membrane. Dr. Gruening kindly consented to examine her ear on January 6, and found a normal drum, no perforation; acuteness of hearing slightly diminished, pointing to a chronic otitis media; the Eustachian tube free. The necessary incidental manipulations did not produce any attack. Probing of the antrum by the fistula, touching of the alveolar process, and chewing always caused acute pain, which, however, was also liable to occur spontaneously, especially at night. All other resources being exhausted, a neurectomy was decided upon, and was carried out in the German Hospital on January 19, almost in the same manner as in the first case. Profound ether anæsthesia was maintained only while the cutaneous incisions were made. Owing to their slight proportions, the sections through the facial bones were easy and rapid, the hemorrhage at first somewhat copious, but ceasing spontaneously. In the light of the experience gathered in my first case, the division of the orbital plate of the superior maxillary was so modified as to run in the antero-posterior line, from a point of the infra-orbital margin midway between the lachrymal duct and the infraorbital canal, backward and parallel with this canal to the inferior orbital fissure. Thus injury to the nerve and the lachrymal duct was avoided, and the slight tuberosity marking the inner side of the posterior end of the infraorbital canal, the chief obstacle to a free exposure of the spheno-maxillary fossa was gotten out of the way. On turning out the resected mass, the nerve was seen to slip easily out of its canal, and could be readily followed to and cut away at the foramen rotundum, the removed portion measuring one inch and three-fourths. The hemorrhage was throughout controlled by short compression. The wound was closed by catgut sutures, and capillary drainage of the spheno-maxillary fossa by a few strands of catgut was employed. The cutaneous incision healed throughout by adhesion; the place where the catgut drainage lay, continued to discharge a slight amount of serum for two weeks, then closed. Anæsthesia was fully established immediately after the operation, but the time of the return of sensibility was not marked. The attacks had ceased, and did not return till March, 1883, when she again complained of pain in the upper lip, the attacks being of a mild character and of short duration, and easily controlled by small doses of morphine.

Case III.—Jacob Kahn, dry-goods clerk, æt. 63, a well-built and well-preserved man, who was unable to name a cause for his complaint. The first series of severe attacks of facial pain occurred in November, 1879, and lasted for four weeks. Its seat was at the point of exit of the left infraorbital nerve on the face, the pain radiating into the upper teeth, the lower eyelid and left ala nasi. It was reduced by local injections of morphine, and a pause of three months followed. Since the spring of 1880, the paroxysms became somewhat more frequent, were most easily produced by mastication, but were controlled by morphine. In the spring of 1882, the attacks grew more severe, and the patient sought relief in an institute established for the treatment of nervous complaints, where he was subjected to a prolonged course of medicinal and galvanic therapy; but no improvement following he became discouraged, and having been admitted to my ward at Mt. Sinai Hospital, begged for operative relief.

The attacks were most severe in the evenings, were readily produced by touching the lower eyelids; there was a punctum dolens a little above the foramen infra-orbitale. The upper teeth and palate were free, irradiation of the pain being noticed only along the track of the supraorbital nerve. In the absence of any signs pointing to a central cause, exsection of the nerve was decided upon, and carried into effect on August 30, 1882, under chloroform. The steps of the operation did not differ from those in Case II., except that the massive frame of the patient's head made the bone-sections rather laborious. The hemorrhage was about the same as in the former cases up to the moment when the saw, having cut through the entire superior maxilla, entered the nasal cavity, when it suddenly became very profuse. Ice-water was thrown into the nares, but failed to check the hemorrhage, wherefore it was decided to hasten the remaining steps of the operation. The malar bone and orbital plate of the superior jaw were quickly divided, the resected parts were turned out of their bed, and then the source of the profuse hemorrhage became apparent in a laceration, by the saw, of a very turgid erectile body, covering the turbinated bone. The thermo-cautery soon converted this erectile tissue into a dry eschar, and the operation was finished in the usual manner. The time consumed was forty minutes. Meckel's ganglion and one inch and a half of the nerve were removed. Catgut sutures, drainage, and a light compressive dressing completed the work. The operation was followed by prompt relief, and the cutaneous wound healed by first intention, no fever appearing, but the nose continued to discharge pus for a considerable time, and finally the skin became reddened over the line of section through the malar bone. A small puncture in the cicatrix being made, about three weeks after the

operation, the probe detected a rough surface; and subsequently, in January, 1883, a sequestrum corresponding to the temporal side of the section was extracted, the defect being marked by a deeply retracted cicatrix. Up to date, the patient remained free from facial pain.

Dr. Sessel kindly examined the nerve removed from Case I. at the first operation, and also that from Case II., and found both normal in appearance. In Case III. the specimen was lost. The proposed modifications, that is, sawing through the middle of the malar bone instead of dividing the frontal and temporal processes of the same, then, instead of Langenbeck's transverse, an anteroposterior (sagittal) section through the orbital plate of the upper jaw on the inner side and parallel to the infraorbital canal will shorten the operation and will materially increase the facility of access to the most central portion of the nerve.

It is far from my intention to urge the propriety of this operation in every case of supraorbital neuralgia, and the report on the three cases in this paper was rather inspired by the desire of testing the value of a somewhat untried procedure, and to increase the number of available means for combating a treacherous enemy. As long as the true nature of prosopalgia remains unknown, the employment of any means, and of every means, must be fair and permissible, however empirical and unscientific they may appear to be.

DR. F. LANGE would merely say that, starting with the principle to cause as little lesion as possible, he thought the certainty with which prompt union of the wound could be expected was greater in Leucke's operation than in the one which Dr. Gerster had described, because any septic influence which may follow opening of the nasal cavity and its appendages is excluded. He also thought that the thoroughness with which the surgeon was able to remove the branches of the nerve after its exit from the skull, was greater in Leucke's operation than in the one described by the author of the paper. It seemed to him that it must be quite difficult from the front to reach with certainty the sphenopalatine ganglion, although he had had no practical experience in the method. Finally, in comparing the result of the operation in the patients presented, from a cosmetic point of view, one must evidently decide in favor of Leucke's operation.

DR. T. M. MARKOE said that his experience had been limited to a single case, and in which he performed the operation through the antrum. He found no difficulty in detaching the nerve from the canal in which it lies in the superior maxillary bone, and, holding the nerve with a pair of forceps, he was able to trace it back with the end of the scissors, and succeeded in cutting off the nerve not so far back as the foramen rotundum, not so far back as the point where the two short branches go to Meckel's ganglion, but close to that point, and he felt that he cut off the nerve posterior to the two posterior dental branches, those in which relapse would seem most likely to take place. The operation was difficult and very tedious by reason of inability to get light at the bottom of the cavity, nevertheless, he felt quite sure that he cut the nerve at the point mentioned. The result was extremely satisfactory, but the entire case impressed him unfavorably concerning neurotomy in these cases. The case began as one of neuralgia of the inferior maxillary nerve, for the relief of which he trephined the inferior dental canal some two years before, and removed about one inch of the nerve, and the cure was satisfactory. After a few paroxysms the pain entirely subsided, but finally it returned in the second branch, the infraorbital, and it was for the relief of this relapse that he performed the operation on the superior maxillary nerve above described. The patient was entirely relieved by this second operation, and Dr. Markoe saw nothing of him for nearly three years, when he returned, saying that he had not had pain in the region of the distribution of the infraorbital nerve, but was then suffering intensely from supraorbital neuralgia, and refused to take any further chances of recovery by operation. In other respects the patient was entirely healthy, and there was no reason to suspect that the affection had a central origin.

DR. GERSTER then presented the patient, upon whom he operated in May, 1881, and he said he was aware that this method would have to be rarely employed, but as it may be useful in another instance, and is adapted to the removal of the second branch of the trigeminus, he thought it was worthy of the effort which it requires. That was the only object which he had in bringing the operation forward. He was sure that Luecke's method was preferable in many cases, while in other cases Carnochan's method would be the better one to resort to; but there must be cases where the method which he had described will be the best, either as the first operation to be performed, or as the last resort.

As regards the question of the healing of the external wound, since the introduction of antiseptics this was a question of much less importance than formerly. The omission of opening the antrum is not of much advantage, as already shown by Wagner's experience, which, to be sure, was 'gained before the days of antiseptic precautions. What seemed to him most curious was the circumstance that, after having removed the entire nerve from the infraorbital canal, sensation returns so quickly in those parts which are innervated by the second branch. Perhaps this may be explained by some filaments of sensitive nerve passing back by way of the vidian nerve to the facial, and thus distributed to the skin of the face.

DR. W. S. HALSTED remarked that in the reproduction of almost the entire superior maxillary nerve, the infraorbital canal might play the part of the "tubular suture" of Gurlt and Vinlair; the divided ends occupying a so-called "virolage."

DR. J. W. HOWE was unable to understand the advantages which the operation described by Dr. Gerster had over that performed by Dr. Carnochan.

DR. GERSTER said the chief advantage which the operation had over all other operations was that it gives a great deal of space and light, and taking all the cases together as they come, it afforded better opportunity for manipulation in the bottom of the spheno-maxillary fossa.

DR. HOWE thought that there could be no great difficulty in dissecting out the branches of the nerve in Carnochan's operation, and cited one case which he had last winter. The only difficulty which he experienced was in determining whether or not he had to deal with Meckel's ganglion, and he asked whether there was any special appearance or condition by which Meckel's ganglion could be distinguished from a little mass of

cellular tissue and bloodvessels. The case in which he operated was one of seventeen years' standing, accompanied by spasmodic contraction of the muscles of the face. The pain was relieved very much for two weeks after the operation, and it then returned, but without spasm. A drainage-tube had been passed through the canal, and this was injected with a strong solution of chloral, which diminished the pain, and since that time the patient has been comparatively free from suffering; at least, has not had any violent pain whatever.

DR. LANGE said that in the patient presented it was rather easy to trace the branches arising from the trunk of the nerve down to the spheno-palatine ganglion, probably because the patient was a very favorable one so far as a scanty amount of fat was concerned. It seemed to him also that the nerve, so far as it had been exposed in the cadaver presented by Dr. Gerster, was not reached so immediately at the foramen rotundum as it was possible to do in Leucke's operation; and it also appeared to him that a few of the thin branches of the nerve were passing down, which might be easily overlooked, and the nerve cut just in front of these fibres, and in that way the operation be performed less thoroughly.

THE PRESIDENT said that three years ago he had opportunity to present to the Society a case of persistent infraorbital neuralgia which had been cured by Carnochan's operation. The patient was seen two years afterward, and there had been no return of the pain. In this case, Wagner's operation had been previously performed by Dr. Seguin, who had had the patient under treatment for a long time. The first operation was accomplished without difficulty, and the nerve was divided probably not much further back than the posterior margin of the orbital plate. The patient was relieved for a time, but as there was a recurrence of the symptoms, an opening was made by him into the antrum with a chisel, and the inferior wall of the canal opened up by means of slender scissors, and the posterior wall of the antrum broken through by the blunt end of the same instrument. The remains of what was supposed to be the nerve, but which proved to be cicatricial tissue, to which the posterior portion of the nerve was attached, was seized with the forceps and held taut, and by means of a little, forked, blunt hook, carried onward to the foramen rotundum, the nerve was traced out and there divided with scissors. The operation was aided very materially by the use of reflected light from the head-mirror. Healing was rapid, and no constitutional reaction took place, and the deformity following the operation was very trifling, indeed. In fact, he thought that the more severe osteoplastic operation should be reserved for the more obstinate cases. Carnochan's operation has advantages over that described by Dr. Gerster or Leucke in ease of performance, freedom from hemorrhage, and lessened deformity. He could conceive of the possibility of necrosis occurring after both the osteoplastic operations, and also the possibility of mastication being interfered with in Leucke's operation. Under such circumstances, Carnochan's operation should be the first to be resorted to.

The question raised by Dr. Howe is a pertinent one. The ganglion cannot always be recognized. Dr. Weir was unable to recognize it in his case, and other surgeons had been unable to recognize it, although the extraction was accomplished, as shown by paralysis of the palate immediately after the operation.

The President also thought it a point worthy of note that one of Dr. Gerster's cases proves the possibility of a good deal of hemorrhage which interferes with seeing the different anatomical structures.

DR. LANGE remarked that one advantage which Leucke's operation possessed was, that hemorrhage is quite insignificant, and also the disfiguration is very much less than that left after any of the other operations. He would emphasize the statement that Leucke's operation involves much less surgical interference than does Carnochan's, or that by temporary excision of the jaw. There is, in fact, only the lesion of the zygoma, which is comparatively unimportant. So far as he knew, the process of healing had been favorable.

THE PRESIDENT asked if suppuration and inflammation should occur, would there not be more or less impairment of the muscles of the jaw?

DR. LANGE said he should think so, and that in some cases a certain degree of difficulty in mastication had followed the operation, but not sufficient to make it especially uncomfortable for the patient.

DR. T. M. MARKOE said that in thinking of these cases for many years past, he had been strongly impressed with the feeling that if it could be shown that these most severe and more radical, more perfect operations for neurotomy, were certainly successful in curing the disease, then they would be justifiable, but his impression was that the operations which had been described by Dr. Howe, and by himself, were very much less dangerous, less severe, and produced results which at least would compare favorably with those which had been recorded of the more severe operations referred to by Dr. Lange and by Dr. Gerster. It may be a less perfect operation, but he could conceive that if the scissors fell outside of the posterior dental nerve, all had been accomplished that could be done by exsection of the nerve, and he did not believe that it is necessary to destroy Meckel's ganglion. His own feeling had been that these severe operations did not offer so much better prospect of success as to justify their performance, but at the same time he did not wish to dogmatize upon the subject.

DR. H. B. SANDS said that within a year he had had occasion to perform Leucke's operation, not for the purpose of curing neuralgia, but with the intention of removing a tumor which was supposed to be situated in the spheno-maxillary fossa. The tumor was found where it was supposed to be, but was so extensive and so firmly attached that the operation for its removal was abandoned as impracticable. In that case the wound did well, and the bone became consolidated without necrosis. There is now noticed—about nine months after the operation—considerable difficulty in opening the mouth; but he believed this not to be due to the operation, but to an increase of the size of the tumor. He was certain that the operation proposed by Dr. Gerster, as well as the one referred to by Dr. Lange, excelled all other operations in the ease and certainty with which the parts lying in the spheno-maxillary fossa were exposed to view. Many years ago he performed von Langenbeck's operation, for the removal of a tumor situated in the spheno-maxillary fossa, and found that the end was accomplished without difficulty. He

should think the nerves in the same region might be removed with equal ease.

DR. E. L. KEYES reported

A CASE OF DEATH BY ETHER,

occurring in a colored boy, upon whom he was operating in Bellevue Hospital for exsection of the knee-joint. The patient was about twelve years old, and was apparently in perfect health, except the disease of the knee, which had existed for a number of years. He took the ether at the hands of one of the house staff, and there was no untoward symptom for an hour or more. Dr. J. D. Bryant was present, and after the operation was substantially completed, he felt the patient's pulse, pronounced it excellent, and left the room. About a minute later, the gentleman who was administering the ether said that something was wrong, called attention to the fact that the boy was breathing faintly, and that the pulse had disappeared from the wrist. Dr. Keyes at once resorted to all the usual measures for resuscitation, such as hanging the head over the table, artificial respiration, hypodermic injections of ether, ammonia, brandy, faradization of the diaphragm, strapping the extremities, etc., and these efforts were continued for forty-five minutes, but without avail, as the boy was dead. Dr. Keyes thought that the boy was probably dead before he had time to resort to any measures for resuscitation. The autopsy was made by the house surgeon, who reported that all of the organs were normal. All the internal organs were intensely congested, and the heart was empty, having stopped in systole. The ether used was that manufactured by Powers & Weightman. The quantity was nearly one pound. There was no mucus in the larynx. The patient had not vomited or attempted to vomit; everythink seemed to be going on nicely, when suddenly death occurred by the heart.

DR. LANGE said that the only sad experience with ether he had ever had was in a female patient upon whom he had operated for strangulated umbilical hernia. She had a weak heart at the beginning of the operation. A fit of vomiting occurred; the heart's action ceased, and also respiration. Tracheotomy was immediately performed and the trachea sucked out, but life was extinct.

DR. SANDS thought it important to distinguish between those cases in which death occurs slowly from asphyxia and those in which it occurs suddenly from cardiac paralysis. In the latter class of cases it seems doubtful whether there would be time to resort to any measures for restoration, as death takes place sometimes almost instantly. If transfusion could be done in time, it would be indicated in some cases. He recalled two cases of death from ether which occurred in the New York Hospital. One case was that of a stout, healthy man, who, in the use of a pruning-knife, accidentally wounded his right carotid artery, and nearly lost his life upon the spot from profuse hemorrhage. He was brought to the hospital in a state of exhaustion. Dr. Willard Parker immediately came to see him, called a consultation, and proceeded to expose the injured vessel. In that case Dr. Sands remembered that he had his finger upon the patient's pulse, which became imperceptible immediately after the incision had been made through the skin. The operation was suspended for a few minutes; some restorative was given, the pulse was again felt, and the operation was proceeded with. Then a second time the pulse stopped, the face became pale, respiration ceased, and all attempts at resuscitation proved unsuccessful. In that instance death was due to the excessive action of the ether upon a heart already enfeebled by loss of blood, and therefore it might perhaps have been averted by a preliminary transfusion.

The other case occurred in the service of the late Dr. Allin, who was about to remove a tumor of the upper jaw from an old woman. The patient was in the sitting posture, and in that case also, although the face had become somewhat livid from ether, just after the incision was made through the skin, before much blood escaped the pulse stopped, and the heart's action was not resumed. The suddenness with which death occurs under such circumstances is very appalling, and seems to give little encouragement for the employment of any attempts to restore animation. He believed that in Dr. Keyes's case death had already taken place when failure of the pulse was noticed.

THE PRESIDENT said Dr. Allin's case excited a great deal of attention at the time, and observations determined that many of the deaths from ether occurred in connection with operations about the jaw and neck. This fact subsequently received a more scientific explanation from Schiff, who showed that when animals were anæsthetized, pinching the neck would arrest the heart's action and respiration. Still, it was well known how safe ether is; while chloroform kills one in twenty-five hundred, ether kills only one in twenty-five thousand. Perhaps this low mortality with ether might be explained by the fact that were it not for the warnings which ether gives, by stertor, etc., death would take place more frequently than it does.

DR. POST said that the only two fatal cases which he had seen with the administration of ether were those in which operations for the removal of tumors of the neck were being performed, which caused considerable embarrassment of respiration. There was no blood nor vomited matter to account for the fatal termination.

The PRESIDENT added another case which came under his observation while he was an interne in the New York Hospital—that of a double incarcerated scrotal hernia of immense size, which could be previously partially reduced, though usually filling the scrotum. The house-surgeon gave ether, and forced up the contents of the hernia into the abdomen, and the man ceased to breathe. Nothing was found on the autopsy to explain the sudden death, and the fact that the abdominal cavity was compelled to receive more than it was accustomed to, and thus the action of the diaphragm interfered with, was received as the probable cause.

DR. L. M. YALE referred to a collection of seven thousand cases of anæsthesia produced in one of the English hospitals, and in all the instances where alarming symptoms had occurred it had been noticed that the patients who had been rolled upon the left side recovered, while those who were rolled in the opposite direction died. Whether or not this was a general law was not stated, and he was unable to say.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, January 14, 1884.

THE PRESIDENT, WILLIAM DETMOLD, M.D., IN THE CHAIR.

THE First Stated Meeting of this Society was held last Monday evening, at the College of Physicians and Surgeons, New York. The first business in order was an

INTRODUCTORY ADDRESS

by THE PRESIDENT, in which he remarked that in welcoming the gentlemen present, he supposed it would be proper to state the object in view in the formation of the Association. It was well known that in the profession in New York there was going on a conflict which partook somewhat of the nature of a family quarrel; and family quarrels—like religious wars—were proverbially bitter and fruitless. The religious war of the Reformation in Germany lasted for thirty years, and then came to an end only because each side was exhausted. Yet it was a fact that neither party had gained anything by the conflict. He wished to state at the outset, however, that this Society did not intend to carry on the warfare in the profession. A large and respectable proportion of the medical men of New York reverently adhered to the Code of Ethics of the American Medical Association; and even admitting, for the sake of argument, that there might be some defects and shortcomings in it, they were not willing to abandon it. The opposite party was bent on destroying or emasculating this Code, which we earnestly desire to preserve. There might be honest differences of opinion among the members of the profession about certain points; but there could be no difference of opinion as to the fact that when the medical profession of the United States were met together in their representative assembly, the profession of the Empire State was excluded from the seat of honor to which it was entitled. It was the desire of the members of this Association that the medical profession of New York should no longer be placed in such a false position. They had not come together pledged to uphold the old Code any more than they had come pledged to uphold the laws and Constitution of the United States. The one was taken for granted as much as the other. This was a matter understood. Nor were they pledged to fight the other party in the profession, since they proposed to remain members of the County Medical Society, although that body had trampled under foot something which they held sacred. They had simply formed an Association which, together with similar societies throughout the State, could send delegates to Albany for the purpose of forming a State Medical Association, by means of which the profession of the great State of New York might once more become represented in the American Medical Association, whensoever and wheresoever that national body met. In conclusion, he would only say that it was intended that the papers presented to the Society, and the discussions participated in by its members, should be of the highest scientific value.

PROF. AUSTIN FLINT, SR., then read a paper on

THE PATHOLOGICAL AND PRACTICAL RELATIONS OF THE DOCTRINE OF THE BACILLUS TUBERCULOSIS.

(The paper appears in full on page 60 of THE NEWS.)

Dr. Flint was received with enthusiastic and prolonged applause, and before he commenced the reading of the paper he remarked that he considered it no small honor to be the first to present a scientific communication to this Society, and that he heartily congratulated it on the auspicious manner in which its career of usefulness had been inaugurated.

DR. WILLIAM H. WELCH in opening the discussion said that, personally, he was fully in accord with the views expressed in the paper. He had only one suggestion to make, and that was, that negative testimony in this case was of but little value as compared with positive. The fact that no bacilli could be found in any given case, especially if only one examination for their presence was made, did not prove that tuberculosis did not exist; while, on the other hand, if bacilli were found, it was proof positive of the existence of the disease. Repeated examinations, performed with great care, should be made when the early stages of tuberculosis were suspected, and great caution was to be observed in drawing conclusions from the apparent absence of the bacillus. The finding of the bacillus, he believed, established the diagnosis with absolute certainty.

DR. E. G. JANEWAY stated that he wished to corroborate what Dr. Welch had said. He was a firm believer in the existence of the bacillus and in the contagiousness of phthisis. Long before the brilliant discovery of Koch he had had his mind directed towards the infectiousness of the disease, and the latter had offered a practical solution of the matter which was entirely satisfactory to him. He had seen tuberculosis in certain families where there was nothing to explain its presence except the idea of contagion. Where there was no hereditary tendency or congenital taint whatever, he had known three or four members of a family to succumb to the disease. The lack of belief in the contagiousness of phthisis, he thought, led many physicians to neglect making proper inquiry as to whether patients had not been exposed to infection. He then proceeded to relate a case which he said he had already published, but which was of so striking a character that he would venture to repeat it. It was that of a young man suffering from pulmonary tuberculosis, who had lost three dogs in succession with all the symptoms of the disease; the animals having been in good health at the time that he purchased them. It was ascertained that he was in the habit of taking the dogs to bed with him (he owned but one at a time), and that they slept in such a position as to cause them continually to inhale his breath. Dr. Janeway remarked that he did not know of any case of the disease among dogs in which more plausible proof of its contagiousness was afforded. Physicians from different parts of the country had frequently mentioned cases to him which seemed to point strongly to a specific contagion. One, as he recalled, had told him that he had known of twenty-five members of the branches of a single family being attacked with tuberculosis.

Another point of importance was, that in members of a family in which it had appeared, who were themselves supposed to be free from it, the disease sometimes existed in a latent form and made very considerable progress before it was detected. Thus, in a family in which the mother and a sister and brother had died from phthisis, he was called to see a young woman who was suffering from hæmoptysis, and on making an examination of the chest of another sister, who had never complained of any trouble, he found a more marked tubercular condition than in the one who had had the hemorrhage. The French writers mentioned a case in which a man

was successively married to four wives, all of whom died of phthisis, the husband himself also finally dying of the disease. He fully agreed with what Dr. Welch had said in regard to negative evidence. In the early stages he had often found it very difficult to get sputa from patients at all. In the sputa of the same patients, after the disease had become more fully developed, he had in some instances found bacilli. One failure, as Dr. Welch had remarked, ought not to make us exclude phthisis. He would allude to only one other point. That day he had been at the post-mortem examination of a patient in whose lungs was found a considerable amount of cheesy degeneration. Three and a half years ago he had hemorrhage from the lungs, and the physician who attended him at that time found disease at the apex of the left lung; a fact which was afterwards entirely forgotten. In another case, where the patient died from gall-stone, the evidences of past tuberculosis were found, though it had been eighteen years since he had suffered from cough and expectoration.

DR. GEORGE PEABODY remarked that he also was fully in accord with all that had been said on the subject, and that he could only add that some corroborative evidence was afforded by the treatment devised by Kurchman, of Germany, several years ago, viz.: The use of antiseptic masks, through which the patient breathed in cases in which the disease was largely situated in the larynx. This plan he had himself tried in certain hospital patients, who had expressed themselves as greatly relieved thereby, and who had persevered in wearing the masks, notwithstanding the weather was then quite hot, on account of the relief afforded by them. In some instances the cough was markedly diminished, in some the expectoration, and in some the night-sweats, while in still others all three symptoms were benefited.

DR. NELSON related what he thought was a significant case, in the present state of the subject of tuberculosis. A gentleman who was troubled with cough and expectoration married a lady who was at the time in the most perfect health, but who not long afterwards was attacked with phthisis, and died, the husband having recovered.

Another member said that in 1868 he removed sixteen ounces of pus from the pleura of a young lady twenty-three years of age, and hermetically sealed the external wound. A few months afterward she died of tuberculosis. The remaining members of the family, which consisted of the father, mother, a sister, and two brothers, were at that time in good health; but in less than two years the entire family had been swept away by phthisis. Within a month after the death of the young lady mentioned, her sister became affected and soon died; and before a year had elapsed both the mother and father were dead. The elder brother was the next victim, and finally the younger brother succumbed. Before the death of the first daughter the family removed to a more salubrious location, immediately adjoining Central Park, and from the first they were surrounded by the best hygienic conditions. This striking history he had also reported to the Academy of Medicine.

DR. WILLIAM H. WELCH then presented

A SPECIMEN OF HYDATID TUMOR.

This was a large echinococcus cyst of the spleen, which he said was of considerable interest on account of its rarity. The patient in whom it was found was a German who died in Bellevue Hospital from superficial external burns. No previous history of disease could be obtained, and as the tumor was only accidentally discovered at the autopsy, the clinical aspect of the case was, of course, defective. No other pathological condition was discovered. The growth was attached to the hilus of the spleen, and was apparently in the gastro-splenic omentum. No external swelling seemed to be caused by it, and it was covered by the intestines; the transverse colon passing directly over the tumor. In the books it was often put down as a point in the diagnosis of enlargement of the spleen from any cause, that there would be complete flatness extending over a greater or less area, on account of the intestines being underneath the spleen. In this instance it was seen that just the opposite was the case, and during life there would undoubtedly have been tympanitic resonance over the seat of the tumor, from the fact of the transverse colon passing above it. There was a large fibrous capsule, almost entirely devoid of cells, and some calcareous deposits. On making an incision the capsule was found to contain about four ounces of clear fluid, and after it had escaped it was found that there was a large cyst in the centre which had collapsed. This was the mother-cyst, while surrounding it there were at least two hundred daughter-cysts. The method of development was, therefore, exogenous, which was much less common than the endogenous, in which the daughter-cells grow within the parent cell. These daughter-cysts are of all sizes, from that of a pea to that of a hen's egg. No heads of echinococci could be discovered, but some hooklets were found. The ova of the echinococcus were supposed to enter the human intestines through the agency of drinking water.

Dr. Welch then gave an elaborate demonstration on the blackboard of the development of echinococcus cysts in the human subject. After describing particularly the endogenous and the exogenous, he went on to speak of the third form, the multilocular cyst. This, he said, had never been met with in this country, and as it was found exclusively in Switzerland and Southern Germany, he thought it probable that it was not produced by the same embryo as the others. In the case which he presented, there seemed to be an attempt at spontaneous cure. The explanation of the special condition found was to be looked for in the presence of the very thick fibrous capsule, which had caused a marked narrowing of the bloodvessels passing to the growth, and the parasites were thus, to a great extent, deprived of their means of subsistence. As regards echinococcus cysts in general, they were not frequent in this country. Sixty-one cases had been collected by Osler, of Montreal, and a large number of these were in foreigners. Personally, he had seen four cases in the dead-house of Bellevue Hospital. All these were in foreigners; three of the patients being Germans, and one an Irishman.

It had been a question in his mind whether the affection ever occurred in native Americans; but, on the whole, he was inclined to the opinion that it did in certain rare instances. In this case, the spleen was flattened out to three times its natural length. The fluid which the cyst contained was clear, opalescent, and having only a trace of albumen in it. The negative character

of the fluid was the main point of diagnosis in these cysts during life; but it was always to be borne in mind that the fluid of parovarian tumors (cysts of the broad ligament) was almost exactly similar. It was difficult to make the diagnosis with certainty, therefore, unless hooklets were discovered, when, of course, there could be no longer any doubt about the matter.

At the conclusion of Dr. Welch's remarks, the Society went into executive session.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, December 14, 1883.

THE PRESIDENT, T. A. RODGER, M.D., IN THE CHAIR.

TERTIARY SYPHILIS: CEREBRAL, LARYNGEAL, AND RECTAL.

DR. GEORGE ROSS presented the specimens, accompanied by the following history: Woman, aged thirty-six, was brought to hospital November 20th, with left hemiplegia; eyes fixed, and deviating to the right; pupils contracted; eyeballs prominent; both upper eyelids drooped slightly; tongue protruded to left side. Roused with difficulty, and then answers questions rationally in a whispered voice. Paralysis not complete in left side; she could lift the leg a little, and offered slight resistance to flexion and extension of the arms. Complained of pain in the right occipital region. No fever. Patient had been under treatment for necrosis of palate, and syphilitic affection of eyes and larynx. Had severe headaches all summer. The present attack began four days before admission. On the evening of the 10th, she went to bed in usual health, but during the night she behaved strangely and did not seem well. The next day her husband noticed that there was something wrong with the left arm, as she did not use it freely. On Sunday, the 19th, there was hemiplegia. While in hospital, no change took place in the paralyzed parts. The right cornea became turbid, and an ulcer formed; there were the other evidences of involvement of the right fifth nerve. There was right external strabismus. Passed a good deal of pus and mucus from the bowel, and on digital examination a firm stricture was felt about one inch and a half from the anus. The breath was fetid, and towards the close there was considerable laryngeal stridor. There was great tenderness of the larynx externally. She gradually sank, and died on the 8th. The corneal ulcer healed, but the tissue remained opaque.

The brain presented extensive syphilitic disease at the base and in the right Sylvian fissure. The right temporo-sphenoidal lobe was firmly adherent in the middle fossa, and both dura and pia mater thickened and adherent. The fifth nerve, just as it entered the Gasserian ganglion, was involved in a mass of gummatous tissue, growing beneath, and attached to the margin of the tentorium. The nerve, for a quarter of an inch was swollen, and the fibres separated. The right optic nerve, close to the commissure, was surrounded by recent infiltration, and was inflamed and swollen to nearly double the size of the left nerve. The right sixth appeared involved, but the third was free. The right temporal and orbital convolutions were firmly united together by thickened and infiltrated tissue. The right middle cerebral was small, and a few lines from its origin passed directly into a gummous mass which surrounded it for nearly half an inch. The membranes in the fissure beyond this were free, and the arteries small and full of white and red thrombi. The vessel in the gumma was quite occluded. The anterior cerebral artery contained a tolerably firm clot. The other vessels and the rest of the base looked normal. There was red softening of the convolution and parts supplied by the middle cerebral, particularly of the island and the ascending convolutions. Both nuclei of the corpus striatum were softened. The right optic disk was slightly swollen, but the intense neuritis evident near the commissure did not extend the whole length of the nerve.

There was extensive destruction of hard and soft parts of the palate, and ulceration of upper part of pharynx, and in the nose. The larynx presented advanced syphilitic disease; ulceration of both cords—most of the left. The greater part of the thyroid cartilage was neurotic, broken into three or four segments, and surrounded with sloughing tissue. There was suppuration beneath the sterno-thyroid and thyro-hyoid muscles. The anterior part of cricoid cartilage was also necrosed. The rectum presented a large area of ulceration, and a short distance within the anus there was cicatricial tissue in the form of an annular ring.

DR. HENRY HOWARD remarked on the frequency of cerebral syphilis, and gave his experience of its connection with acute mania and other forms of insanity.

PREATAXIC TABES DORSALIS.

DR. JAMES STEWART presented a patient whose history and symptoms were as follows: James C., aged 33, clerk, complained only of dimness of vision. He first noticed it ten weeks ago, and three weeks after consulted Dr. Butler, who diagnosed the case as one of tabes. Twelve years ago he had double vision for a week. In the year 1879, he also recollects seeing double for three days. His general health has been excellent. Has never had syphilis. Three years ago he worked for several months in a very damp cellar. Family history is unimportant. *Present state:* There is permanent contraction of the right pupil (paralytic myosis). There is loss of reflex contraction of the pupils, while both contract on accommodation. There is also loss of reflex dilatation of the pupils; when the skin is ever so severely irritated by the faradic brush, there is no response. There is well-marked atrophy of both disks. The patellar reflex is absent in both legs, and this with the eye phenomena are the only symptoms of tabes present. No lightning pains, no bladder or rectum pareses, no ataxia, no delayed, lost, or perverted sensations. The skin reflexes are present. Notwithstanding the absence of so many prominent symptoms, there can be no doubt that the case is one of tabes dorsalis in the preataxic stage. The case is a good illustration of the now generally conceded opinion that the disease is essentially one of the sensory tracts. Three of the prominent symptoms are failure of normal reflexes. 1. Reflx contraction of the pupils. 2. Loss of the reflex dilatation. 3. Loss of the patellar reflex. The patient has been treated during the past seven weeks with the faradic brush, three times weekly, after the manner recommended so highly by Rumpf of Borne.

DR. R. PALMER HOWARD spoke of the importance of these early eye symptoms in tabes, particularly myosis and irregularity of the pupils, and narrated several cases in illustration. Myosis, in his experience, was associated chiefly with two affections, tabes and progressive paresis. The great rapidity of the pulse in some instances had attracted his attention. In three cases under observation, it was always about 100, and he had met with one with a pulse of 140. With regard to the use of the faradic brush, he had a patient at present under this treatment in whom the anæsthesia had been greatly relieved by its use.

DR. HENRY HOWARD spoke of impotence as an early symptom of locomotor ataxia, and asked if this patient still retained his sexual vigor.

DR. OSLER asked if the double vision twelve years ago could be attributed to the same cause as the eye symptoms now present. In cases associated with syphilis the early ocular troubles may be sometimes due to it, as in a patient of his, who had double vision and other symptoms of cerebral syphilis years before the tabes developed.

DR. BULLER remarked that this patient consulted him on account of failing vision, and he found his sight much impaired, R. E. V. $= \frac{20}{C}$; L. E. $= \frac{20}{LXX}$; with great concentric limitation of the visual field. The field for colors was contracted in a similar manner, but there was no central scotoma. The optic nerves presented the usual appearance of progressive atrophy of spinal sclerosis. The condition of the eyes, together with the absence of patellar reflex, seemed to warrant the diagnosis of locomotor ataxia. With regard to the atrophy of the nerves in this disease, Dr. Gowers has made the observation that when this condition comes on early in the course, in the first or preataxic stage, the resulting loss of vision is more rapid, and more complete, than when occurring as a later symptom. This coincided with his experience. When atrophy of the nerves occurred early, it was often, he thought, a matter of doubt whether the trouble was of spinal origin. He knew of several cases in which optic atrophy had led to complete blindness, now lasting for one, two, or three years, without the development of fresh spinal symptoms, although there had been all along absence of the patellar reflex. All of these cases had been regarded as commencing locomotor ataxia by the very highest authorities, both in Europe and America.

DR. STEWART, in reply, said that, so far as the patient knew, he was not impotent.

TAIT'S OPERATION.

DR. ARMSTRONG exhibited a pair of diseased ovaries which he had removed from a single woman, aged 22, who had suffered for three years with pelvic pain, and, for the past year, menstruation every fortnight, not profuse, but accompanied by severe pain. The loss of appetite and vomiting at each period had so reduced her strength that she was quite unfit for work. The ovaries were felt to be enlarged and prolapsed. She was not hysterical. The ovaries were enlarged to the size of walnuts, thickened and fibroid; no adhesions. The patient had done well since the operation, which it was hoped would permanently relieve her.

FIBRO-GLIOMA OF UPPER END OF ASCENDING FRONTAL GYRUS; JACKSONIAN EPILEPSY OF FOURTEEN YEARS' STANDING; THE LEG-CENTRE.

DR. OSLER read a report of the case, and presented specimens and drawings in illustration. The case occurred in the family of a medical man, and was remarkable from the length of time during which the convulsions had lasted, and the limitation of the lesions. After preliminary remarks on cortical epilepsy and the value of pathological cases in localizing the functions of the brain, the notes furnished by the Doctor were read, of which the following is an abstract: "Mary ——, aged fifteen years and nine months. When sixteen months old fell on her head from the table and appeared to be much hurt, but recovered without any serious effects. Five months after, the left hand was noticed at times to be stiff and firmly closed. This continued to increase in severity and frequency for three months, when the leg became similarly affected, and two months later she was confined to bed, as the paroxysms had become general. For eight or ten weeks the seizure continued in this violent way; sometimes she had eight or ten in an hour. No loss of consciousness; then, after lasting for about seven months, they ceased, and she ran about apparently quite well.

She remained free from spasms for a year, when they returned and ran much the same course for six or seven months, and she then again recovered for about the same length of time. This went on until her eleventh year; months in which the spasms were severe and months in which she was quite free. One of the attacks is described by the Doctor as follows: "suppose her at the dinner table. She would suddenly say, 'Oh! I am going to have a spasm' (she knew this by the contraction of the left hand), she would then jump up and go to the sofa, get a cushion, lay it down on the floor, then lie down with her head on the pillow, and then jerk away in a spasm for half a minute or a minute; laughing or talking all through it, and never losing consciousness. She would then get up, replace the cushion, and come back to the table and finish her dinner." About six years after the illness began, the left leg began to show signs of weakness, and gradually the foot turned in. During her eleventh, twelfth, thirteenth, and fourteenth years, the seizures were very bad, and she had no prolonged intervals. For six weeks, at one time, she lay unconscious, and had from fifty to eighty spasms in the twenty-four hours. As the attacks became less frequent she was able to sit up in bed or in an easy chair, and read or do fancy work. Last Christmas, when she was fifteen years of age, the spasms suddenly ceased, and she was ten months without one. A week before her death they returned with great violence, and increasing frequency until they became almost continuous, and for two days there was coma. Three hours before death they ceased, and she passed away quietly. The left arm and hand were weak, not wasted; the left foot was flexed inwards at right angles, and firmly fixed in that position. In reply to questions, the Doctor gave some additional particulars. The spasms always began in the left hand, and appeared to extend to the leg first, and then to the face. The intellect was clear, and she was, though without special instruction, beyond her years in intelligence and general information. The clinical history may be briefly given as follows: Cortical epilepsy

for fourteen years; remarkable intermissions of from six to twelve months. Spasms began in the left hand, at first monobrachial, then extended to the leg, afterwards became unilateral, and finally general. No loss of consciousness for some years. Weakness of left arm, permanent contracture of right leg and foot. Intellect unaffected.

The brain was large and well formed, dura mater natural, no adhesions or spots of thickening on the pia mater, vessels much congested, hemispheres symmetrical, no wasting of convolutions or puckering. In slicing the organ *pre-frontal* and *pediculo-frontal* sections normal. A section three centimetres in front of the fissure of Rolando showed nothing abnormal. In making the *frontal* section, the knife passed through a hard resistant mass in the right hemisphere, occupying the upper end of the ascending frontal convolution. The knife passed exactly two centimetres in front of the fissure of Rolando and the mass occupied the superior fasciculas of the white fibres, nowhere reaching the surface and scarcely touching the gray matter. In this exposure it measured fourteen millimetres in width by sixteen in vertical extent, and was eight millimetres from the surface of the paracentral lobule, ten millimetres from the top of the gyrus close to the longitudinal fissure, and fifteen millimetres from the external surface of the convolution. In a section seven or eight millimetres behind the *frontal* the mass was visible as a small round puckered portion just at the edge of the gray matter, at the bottom of a small sulcus passing into the ascending frontal gyrus from the fissure of Rolando. The mass occupied the upper end of the convolution, and had an antero-posterior extent of about seventeen millimetres, and a vertical of fifteen or sixteen millimetres. It was almost entirely within the white matter, but touched upon the gray at several spots. It had a fibrous appearance with ill-defined borders; and vessels could be seen in it. The *parietal* and other sections were normal. The right crus was badly torn, and no sclerosis could be seen, but the right half of the medulla was smaller than the left and presented evidence of descending degeneration. The cord was not examined.

Histologically the mass appears to be a fibro-glioma. The delicate fibre elements are in excess, but there are many large cells with prolonged fibrillar process. The bloodvessels are numerous. So far as examined, the cells of the gray matter in the immediate vicinity did not appear to be much altered.

Dr. Osler remarked that lesions causing cortical epilepsy were rare in the white matter, but this one was close enough to the gray cortex to induce the irritative effects and the excessive motor discharges causing the convulsions. Gliomata were slow-growing local tumors, and instances were on record of nearly as long duration as in the case under consideration. Dr. Jackson had described one of ten and another of twelve years' standing. The remarkable intermissions were strange features in these cases; periods of quiescence alternating with periods of excessive irritation. The situation of these lesions was of interest in connection with the crural monoplegia and contraction. The tumor occupied largely the anterior portion of the paracentral lobule, the region which has been found affected in the few recorded instances of paralysis of one lower extremity of cerebral origin. The leg-centre is placed in this lobule by Ferrier and Charcot, and this case is in confirmation, as we may reasonably conclude that the lesion, by interfering with conduction from this centre, induced the paralysis and subsequent contracture.

DR. HENRY HOWARD made some remarks on the cases of epileptiform convulsions which he had seen.

DR. HAMMETT HILL, of Ottawa, narrated the case of a lumberman, who was struck on the head with a pike, and received a depressed fracture. He had severe seizures, and was trephined with success, and he had no fits for eighteen years, after which they recurred at long intervals, possibly due to bony thickening about the seat of trephining.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 19, 1883.

THE PRESIDENT, WM. M. WELCH, M.D., IN THE CHAIR.

DR. ROBERTS BARTHOLOW read the following paper on

NITROGLYCERINE AND THE CHLORIDE OF GOLD AND SODIUM IN THE TREATMENT OF ALBUMINURIA.

Hitherto the therapeutics of renal diseases have not advanced in the same ratio as our knowledge of their pathology. It cannot be said now that a cure has been found, but that two remedies of real value are available. I shall attempt to define the place which these remedies should occupy in a curative scheme. To do this, in even the briefest way, I must clear the ground with a preliminary statement.

I start with the proposition that those renal lesions united by the common symptom—albuminuria—are of neural origin. There is a kinship between diabetes and Bright's disease. One of these is sometimes substituted for the other; and during the course of some rare cases of exophthalmic goitre this substitution occurs. Irritation of a certain part of the floor of the fourth ventricle is followed by glycosuria; of another part by albuminuria. The recent observations of Da Costa and Longstreth prove that a relation exists, whether causal or sequential, between certain renal lesions and degenerative changes in some ganglia of the abdominal sympathetic. The hypertrophy of the muscular coat of the arterioles, discovered by Dr. George Johnson, and the increased tension of the vascular system due to an irritation of the vaso-motor centre in the medulla, both present in the chronic forms of albuminuria, are further evidences of the agency of the nervous system. It was, more especially, the condition of elevated tension of the vessels which led to the use of nitroglycerine. This remedy before all else reduces the vascular tension. It also lessens the work of the heart by removing the inhibition exercised by the pneumogastric nerve.

This remedy appears to have been first used by Mr. Robson, an English surgeon, in cases of albuminuria, and by him employed, because the high tension of the vascular system has proved to be so pronounced an element in the more chronic cases. I have, myself, seen some remarkable instances of relief—indeed of cure—effected by it. In cases of mitral disease accompanied by albuminuria, it also renders the highest service—for the diminished peripheral tension lessens the work to be done by the heart, and assists in the more equal distri-

bution of the blood. The effect of this in relieving the renal congestion is obvious.

Chloride of gold and sodium has quite another function. It has long been known that this remedy has a special direction to the genito-urinary apparatus. The ovarian and uterine organs in the female, the testes and vesiculæ seminales in the male, are stimulated by it, and the kidneys, by means of which it is eliminated, and in which it tends to accumulate, are decidedly affected by it in function and structure. In common with some other agents of the class to which gold belongs—for example, corrosive sublimate—the chloride acts on connective tissue, and checks its over-production, or its hyperplasia. It would be quite impossible in this note to go over the evidence on these points, and hence I must ask assent to these statements. They have been accepted as true of gold, from the days of the alchemists and iatrochemists, as any one may ascertain from that curious collection of mediæval medical learning—the Anatomy of Melancholy. It has happened, strangely enough, that Hahnemann and his followers have profited by this knowledge, and have used gold preparations, especially *aurum potabile*, in the treatment of renal diseases with success.

How and when are these remedies to be used?

Nitroglycerine is now administered, as all present know, in the form of the centesimal solution—1 minim of the pure drug to 100 minims of alcohol. The initial dose of this one per cent. solution is one minim, which should be increased until the very characteristic physiological effects are produced. The susceptibility to the action of nitroglycerine varies greatly, and hence the dose cannot be stated in advance. It is necessary to produce some obvious effect. To maintain the same level of action, a slight increase in the dose may be required from time to time. As the effect is not lasting, the interval between the doses should no exceed three or four hours.

The administration of nitroglycerine should begin in acute cases immediately after the subsidence of the acute symptoms. It is indicated in chronic cases at all periods, but is more especially useful if given before hypertrophy of the muscular layer of the arterioles has taken place. When it acts favorably, the amount of albumen in the urine steadily diminishes. The mechanism of its action consists in the lowering of the pressure in the renal vessels. How far any curative effect proceeds from action of this remedy on the sympathetic system remains to be determined.

Cloride of gold and sodium is indicated in the subacute and chronic cases, especially the latter. The earlier it is given, the better, if structural changes are to be prevented or arrested. The good effects to be expected from it will depend necessarily on the extent of the damage already inflicted on the kidneys.

The usual dose is $\frac{1}{20}$ grain twice a day, but this may be much increased, if necessary. At the outset, $\frac{1}{10}$ grain may be given; in a week, the dose should be lowered to $\frac{1}{15}$ grain, and after a month the regular dose of $\frac{1}{20}$ grain should be steadily pursued, with occasional intermissions. Indigestion, gastralgia and colic pains, nausea, or diarrhœa are occasionally caused by it; and, if so, the quantity administered must be reduced. It is usually borne without any discomfort, but after prolonged administration, salivation, weakness, emaciation, trembling, and other nervous phenomena may occur possibly. Such effects, however, are wanting in my experience.

The treatment of albuminuria by nitroglycerine and the chloride of gold and sodium does not necessitate the exclusion of other means—hygienic, climatic, or dietetic. These remedies should, however, be given uncombined, at different hours, and their actions should not be hindered or obscured by the effects of other agents given with like purpose. To this general statement there may be two exceptions: with nitroglycerine, amyl nitrite or sodium nitrite may be given; with the gold and sodium chloride, corrosive sublimate may be combined. If doubts may be felt in regard to the propriety of depending on the utility of these remedies, they need not be long experienced, for if no good effects are observed in two weeks, they may then be discontinued.

DR. CHARLES H. BURNETT then read a paper on

THE SUPPOSED CONNECTION BETWEEN EAR DISEASE AND KIDNEY DISEASE.

Early writers on disease, he said, have shown a knowledge of the fact that alterations in hearing occur in the course of general diseases, as, for example, in diseases of the kidneys. It was supposed by them that the alteration in the functions of the ear, in this form of disease, was due to changes in the auditory nerve. But the results of the more reliable modern investigations tend to show that if an ear disease be due to kidney disease, the lesion usually occurs in the tympanic cavity, and not in the auditory nerve.

Certainly accidents of a hemorrhagic or apoplectiform nature might be expected either in the tympanic cavity or internal ear, in Bright's disease, when we reflect upon the deterioration of the blood and upon the malnutrition and friability of the vascular system, in the later stages of the malady. Further, as Bright's disease is characterized by a tendency to inflammation, especially in serous membranes, and as the membranous structures of the internal ear, or labyrinth, belong to this class of membranes, very naturally organic changes in these tissues might be looked for in Bright's disease of the kidneys.

However, as late as 1856, Rau, in his *Ohrenheilkunde*, published in Berlin in that year, claimed that there was not a solitary reliable observation at that time on record in favor of any symptomatic relation between the ear and the urinary organs. In 1869, Schwartze[1] reported a case of extravasation of blood into the tympanum, as peculiar to Bright's disease, though of rare occurrence; and in the same year, Dr. G. M. Smith, of New York,[2] called attention to the fact that impairment of hearing was at times one of the symptoms of Bright's disease, and a symptom which could not be explained by referring it to uræmia. In 1873, Dr. Roosa, of New York, in his treatise on the ear, referred to an obstinate case of suppuration and pain in the middle ear in a man sixty-one years old, suffering from Bright's disease. In this case, it was supposed that the effect of the renal disease upon the tympanic vessels was the cause of the acute suppuration, and it was also supposed that the disease in the

[1] Archiv f. Ohrenheilkunde, Bd. iv. S. 12.

[2] N. Y. Acad. of Med. See Roosa's Treatise, 1873, p. 257.

drum-cavity was originally hemorrhagic in nature. The subject was deemed of enough importance to place a physician on his guard for renal disease in cases of hemorrhage into the tympanic cavity. It must not be forgotten, however, that there is a purely sthenic form—otitis media hemorrhagica, occurring in subjects entirely free from kidney disease, in which the only effusion is pure blood, the removal of which from the tympanum by paracentesis is followed by cessation of pain and return of hearing.[1]

Again, in 1878, Schwartze[2] states that serous catarrh of the tympanic cavity is found in syphilis, heart disease, pneumonia, Bright's disease, naso-pharyngeal catarrh, and apparently may be due sometimes to vaso-motor disturbances. The same author says, hemorrhages into the labyrinthine cavity and the membranous labyrinth occur in kidney diseases. Also, that extravasations of blood into the tympanum occur spontaneously with acute inflammations in morbus Brightii, cynanche diphtheritica, and in endocarditis verrucosa recens et ulcerosa.

Dr. Paul Pissot,[3] in an inaugural thesis, is disposed to consider three forms of aural disease, which may arise in Bright's disease, viz., tinnitus aurium, partial deafness, and complete deafness. His conclusions are, that affections of the hearing may arise at the beginning or during the course of the renal disease. Intermittence seems to be characteristic of these forms of deafness, which may be contemporaneous with the œdema, or may precede it. They appear with all forms of the disease, and are manifested with variable intensity. But he cannot say to what special lesion of the ear, or of the nerve of hearing, their symptoms are attributable. Delacharrière, a responsible aurist, examined the cases upon the history of which the thesis is based, and found rupture of the membrana tympani, abnormal vascularity of the manubrium, and sclerosis of the tympanum, and was disposed to regard the conditions as causative forces. Pissot held that the hypothesis of Rosenstein, according to which there is œdema in the course of the auditory nerve within the cranium, may explain the intermittence and variations of intensity in these morbid manifestations. This latter process may be analogous to the œdema of the glottis and vocal cords noted in Bright's disease by Fauvel, in 1864. A similar symptom has been noted by Sée.

In alluding to chronic, non-suppurative aural catarrh in children, Von Troeltsch[4] says: "A greater blood pressure from increased action of the heart, as in Bright's disease, must necessarily produce a certain hyperæmia, even in the mucous membranes of the head." Albert H. Buck,[5] of New York, expresses the opinion that in some instances a serous fluid, deeply tinged with the coloring matter of the blood, finds its way into the tympanic cavity through other than inflammatory causes. "Instances of the latter form of disease are very rarely met with, and then usually in connection with a depraved state of the general nutrition, as in morbus Brightii."

Dr. Maurice Raynaud[1] expresses the opinion that diabetic otitis is not only more frequent than is supposed, but that when this has once become a well-known fact, it may prove a pathognomonic index, like anthrax, diffuse phlegmon, and certain erythematous eruptions about the genitals, and arouse suspicion of the presence of the renal disease hitherto unsuspected. He cites a case of well-marked diabetes mellitus, in which there suddenly occurred one evening, a severe earache, after the patient had been in the hospital two weeks, and most carefully watched, so that no chilling could have been the cause of the ear pain. The pain became intense, and towards midnight of the same evening in which the pain set in, there occurred an abundant hemorrhage from the drum-cavity of the affected ear, which was followed by immediate relief. This was followed for several days by a copious sero-sanguinolent, and then serous discharge, which contained leucocytes, and albumen, as shown by heat, but no sugar. Post-mortem examination, twenty-three days after the attack of otitis, revealed a large perforation in the anterior segment of the membrana tympani; red, fungous, and bleeding mucous membrane in the drum-cavity, in which there was a pink, purulent liquid. The ossicles were not dislocated, but were imbedded in granulations, and near the stirrup was a clot of blood. The mastoid cavity was filled with a rose-colored liquid, containing pus-cells, and its bone substance was greatly injected and marbled, presenting all the appearances of inflammation of bone tissue. The labyrinth showed no alterations. The author concludes that osteitis in the petrous bone is a peculiar and constant symptom of diabetic otitis.

P. McBride,[2] in an article devoted to the consideration of the various causes leading to aural disease, states that "occasionally the ear is affected in Bright's disease by hemorrhage into the tympanic cavity. The tympanum becomes filled with blood, which probably either becomes absorbed or leads to suppuration. Schwartze was perhaps the first to observe this condition." McBride further says: "I am not aware that sudden labyrinthine deafness in the course of Bright's disease has been described, but it seems probable that such a contingency might be looked for here and also in pernicious anæmia, in which retinitis hemorrhagica is not uncommon." In the recently published work of Prof. Politzer,[3] on the ear, the author's experience is that in cases in which a supposed connection existed between the organic renal disease and an aural malady, the fundamental cause lay in very apparent changes in the middle ear. He has also found that "catarrhs of the ear run an unfavorable course in tuberculosis, Bright's disease, and all cachexiæ by which the nutrition of the general system has become deteriorated."

Dr. Burnett then offered the following

CONCLUSIONS.

1. Evidences in favor of either frequent or well-marked aural lesions, dependent upon renal diseases, are extremely meagre.

[1] Roosa, Transactions of American Otol. Society, 1882, and O. D. Pomeroy, Ibid., 1875.

[2] Pathological Anatomy of the Ear. J. O. Green's Translation, pp. 97 and 157.

[3] Thèse pour le Doctorat en Médicine. Faculté de Méd. de Paris, April 4, 1878.

[4] Diseases of the Ear, in Children. J. O. Green's Translation, 1882, p. 67.

[5] Diagnosis and Treatment of Diseases of the Ear, N. Y., 1880, p. 164.

[1] Clinical lecture at La Charité, Paris. Annales des Maladies de l'Oreille, etc., March, 1881.

[2] Edin. Med. Journal, February and March, 1882.

[3] Cassell's English Translation, 1883, Phila.

2. Those lesions in the ear, which have been found in connection with Bright's disease and diabetes mellitus, and which may have been dependent upon the dyscrasia induced by these renal disorders, are in the form of sero-sanguinolent and hemorrhagic effusions into the drum-cavity. But the latter must not be mistaken for the sthenic form of otitis media hemorrhagica.

3. From the serous nature of the membranous structures of the labyrinth, organic changes might reasonably be expected in Bright's disease, but positive proof of the occurrence of such lesions based on ante- and post-mortem history is wanting.

NEWS ITEMS.

MEDICAL MATTERS IN CONGRESS.—The following bills, of medical interest, have been introduced in Congress during the past week:

H. R. 2697, introduced by Mr. Randall, of Pennsylvania, to prepare and publish a National Pharmacopœia for the United States, which was read a first and second time, referred to the Committee on Ways and Means, and ordered to be printed.

H. R. 2785, introduced by Mr. Young, of Tennessee, to amend an Act entitled "An Act to prevent the introduction of infectious and contagious diseases into the United States, and to establish a National Board of Health," which was read a first and second time, referred to the Committee on the Public Health, and ordered to be printed.

S. 982, introduced by Senator Miller, of New York, for the maintenance and support of the Marine-Hospital Service. Read twice by title, referred to the Committee on Commerce, and ordered to be printed.

THE YELLOW FEVER OF 1883 AT PENSACOLA.—The total number of cases of yellow fever, and mortality, at Pensacola Navy Yard and adjacent villages, in 1883, is given as follows: Pensacola Navy Yard, cases, fifteen; deaths, six. Woolsey and Warrenton, cases, one hundred and fifty-two; deaths, twenty-seven. Total, one hundred and sixty-seven cases; thirty-three deaths.

HEALTH OF HAVANA.—Sanitary Inspector Burgess, U. S. Marine-Hospital Service, reports that there were five hundred and seventy-eight deaths from all causes at Havana, Cuba, during the month of December, 1883; of which fifty-three were from yellow fever, eleven from typhoid fever, thirteen from malarial fever, four from diphtheria, four from croup, and one from glanders. Forty-three of the deaths from yellow fever were among citizens and the merchant marine, and the remaining ten among the army and navy. During the week ending January 4, 1884, there were seven fatal cases of yellow fever. During the month of December, 1882, there were five hundred and thirty-five deaths, only twenty-four of them being from yellow fever; and during the week ending January 4, 1883, but four from that disease.

CONSULAR REPORTS CONCERNING YELLOW FEVER.—Yellow fever appeared on board the mail steamer "Lima" bound from Panama to Callao. The U. S. Consul, under date of December 12, 1883, reports that the disease appeared when two days out, and three persons died from the disease. The steamer was placed in strict quarantine, and no fresh cases were reported. The U. S. Consul says: "Every possible precaution is being observed on shore to avert contagion, but from the circumstance of the advent of our heated term, much anxiety is manifested."

The U. S. Consul at Buenos Ayres states that two cases of yellow fever were landed at that place from a French steamer which touched at Rio Janeiro, and that the apprehensions caused thereby induced the authorities at Montevideo to place a ten days quarantine on all vessels proceeding from Buenos Ayres. There is a quarantine of three days observed by Buenos Ayres of all vessels from Brazilian ports.

INTERNATIONAL MEDICAL CONGRESS.—The Secretary of State is in receipt of a communication from the Danish Minister, in Washington, D. C., relative to the Eighth Annual Session of the International Medical Congress, which is to be held in Copenhagen in August next. The following is a copy of the letter:

"I am officially informed by my government that the Eighth International Congress for Medical Science, will meet at Copenhagen in the days from the 10th to the 16th of August, 1884.

"The different States having generally been represented, at the preceding meetings of this Congress, by different official delegates, His Danish Majesty's Government entertains the hope that this may also be the case at the impending Congress. Conforming to the wish expressed by the Board of Organization, I am instructed to assure the Government of the United States that the Danish Government would highly appreciate the fact of its being officially represented at the Congress, and to invite you to inform me, in good time, of the names of the delegates to whom may be intrusted this distinguished mission. I have the honor to inclose five copies of the letter of invitation issued by the Committee of Organization, to which will be added later the definitive programme of the labors of the Congress.

"Reminding you that the Eighth International Congress (according to the notice already published some months ago in the medical journals) will be held in Copenhagen from the 10th to the 16th of August, 1884, we have the honor of communicating to you that the General Organizing Committee, formed for the preparatory work, is composed of the following members, living either in or near Copenhagen:

"President, Professor Dr. P. L. Panum. Secretary General, Professor C. Lange. Secretaries, Dr. O. Bloch, Dr. C. J. Salomonsen, and Surgeon-General Joh. Maller. Honorary Treasurer, Professor Dr. E. Hansen Grut. Also the Presidents of the Special Committees of the Section of Anatomy, Professor Chievitz; of the Section of Physiology, Professor Dr. P. L. Panum; of the Section of General Pathology and Pathological Anatomy, Professor Dr. C. Reisz; of the Section of Medicine, Professor Dr. F. Trier; of the Section of Surgery, Professor Dr. Holmer; of the Section of Hygiene and State Medicine, Dr. E. Hornemann; of the Section of Military Surgery and Medicine, Director-General of the Medical Department of the Army, Salomon; of the Section of Mental and Nervous Diseases, Professor Dr. Steenberg; of the Section of Obstetric Medicine and Surgery Gynecology, Professor Dr. Stadfeldt and Professor Dr. Horvitz; of

the Section of Diseases of Children, Professor Dr. Hirschsprung; of the Section of Ophthalmology, Professor Dr. E. Hansen Grut; of the Section of Diseases of the Skin and Syphilis, Professor Dr. Haslund; of the Section of Diseases of the Ear, Dr. W. Meyer; of the Section of Diseases of the Throat, Dr. W. Meyer.

"The Special Committees formed for the aforesaid Sections have, when they found it useful, completed their number by members living outside Copenhagen, partly in Denmark, partly in the other Scandinavian countries.

"In order that the meeting of so many distinguished medical men, whom we hope to see on this occasion, may be as advantageous as possible, the Organizing Committee, following the example of the later Congresses, will communicate with distinguished men of different branches and of different countries, in order to prepare a programme. This programme, as well as the rules, will be forwarded to those of our colleagues whom we suppose take an interest in the work of the Congress, and who might be inclined to participate in it."

INTERNATIONAL CONGRESS OF HYGIENE.—A note from the Minister of the Netherlands in Washington, received by the Secretary of State, gives the information that the International Congress of Hygiene will hold its next session at the Hague, beginning August 21, 1884, and that "Governments, States, Corporations, etc., are invited to send delegates."

NEW YORK STATE MEDICAL SOCIETY.—The Seventy-eighth Annual Meeting of the New York State Medical Society will be held on Tuesday, February 5th, under the presidency of Alexander Hutchings, M.D. The following papers are announced to be read:

Malignant Lymph-Adenoma, with Cases, by Dr. L. S. Pilcher, Brooklyn. Dysmenorrhœa; its Treatment by Dilatation, by Dr. W. W. Potter, Buffalo. Operation for Closure of the Hard and Soft Palate, with Results, by Dr. A. Vanderveer, Albany. Value of Electricity in Diagnosis, by Dr. L. E. Felton, Potsdam. The Treatment of Suppurative Otitis in Children, by Dr. S. Sexton, New York City. A Case of Sympathetic Serous Iritis, with Remarks, by Dr. D. Webster, New York City. Strangulated Hernia, with Reports of Five Cases Treated by Operation, by Dr. J. Chapman, Medina. Two Unusual Cases in Obstetrical Practice, by Dr. W. C. Wey, Elmira. A New Method of Partial Extirpation of the Cancerous Uterus, by Dr. E. Van de Warker, Syracuse. Two Cases of Poisoning by Tansy, by Dr. W. Woodward, Big Flats. Hæmaturia; Two Cases of Extra-Uterine Pregnancy; and Two Cases of Rupture of the Heart, by Dr. T. H. Squire, Elmira. Management of Face Presentation, by Dr. E. L. Partridge, New York City. Morbid Somnolence, by Dr. C. L. Dana, New York City. An Operation for Correcting Deformity of the Auricle, by Dr. O. D. Pomeroy, New York City. Rheumatic Joint Lesions of Children, by Dr. V. P. Gibney, New York City. Biographical Sketch of the Late Dr. G. W. Bradford, by Dr. C. Green, Homer. Orbital Cellulitis, by Dr. T. R. Pooley, New York City. Biographical Sketch of the late Dr. J. F. Jenkins, by Dr. G. J. Fisher, Sing Sing. Poisoning by Potassium Chlorate, by G. B. Fowler, New York City. Spontaneous Pyæmia, by Dr. J. B. Todd, Parish. The Establishment of Hospitals in Small Cities, by Dr. E. H. Parker, Poughkeepsie. House Sanitation; as it is and as it should be, by Dr. W. F. Sheehan, Rochester. Croup as distinguished from Diphtheria, by Dr. A. G. Crittendon, Clifton Springs. The Medical Society of the State of New York in its Relation to Sanitary Science and the Public Health, by Dr. E. Harris, Albany. A Plea for the Pharmacopœia, by Dr. L. Johnson, New York City. Canalization, as Applied to Amputation of the Female Breast, to insure Primary Union under one Dressing, by Dr. A. G. Gerster, New York City.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.—The annual meeting of this Society will be held at Philadelphia on May 14, 15, and 16, 1884, in the Assembly Room of the Union League, Broad and Walnut Streets. The President's reception and the entertainment by the Philadelphia County Medical Society will be held on the evening of May 14, at the Pennsylvania Academy of the Fine Arts, Broad and Arch Streets.

Notice is given that all those who wish to present papers should send the full title and a short abstract of the same to the Committee on Arrangements, John B. Roberts, Chairman, 1118 Arch Street, Philadelphia, on or before March 1, 1884.

THE MISSOURI STATE BOARD OF HEALTH, at a meeting on January 9th, unanimously adopted resolutions concerning the recognition of the diplomas of certain medical colleges.

Resolved, That it is expedient to recognize the Joplin College of Physicians and Surgeons; that it does not recognize the St. Louis Eclectic College; and that it does not recognize as in good standing the Kansas City Hospital College of Medicine, and the American Eclectic College of Cincinnati.

Six applicants presented themselves to the Board for personal examination as physicians, of whom three were accepted and three rejected. In a number of cases of applications for certificates, information had been presented to the Board charging the applicants with an unprofessional mode of practice. A number were rejected on this ground. In others, where the evidence was not conclusive, certificates were ordered issued. It is stated that some of the Colleges not recognized by the Board intend to test the matter in the courts.

THE NEW YORK OPHTHALMOLOGICAL SOCIETY.—At the Nineteenth Annual Meeting of the New York Ophthalmological Society, held last Monday evening, the following officers were elected for the ensuing year:

President.—David Webster, M.D.

Vice-President.—C. J. Kipp, M.D., of Newark, N. J.

Secretary and Treasurer.—James L. Minor, M.D.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL is preparing to increase further its field of usefulness in the way of medical teaching by making an effort towards combining the school with a hospital of its own. On or about February 1, 1884, it will enter its new quarters in East Twentieth Street, between Second and Third Avenues, where the accommodations will be most ample for its school and for sixty to one hundred patients. One hundred and forty practitioners of medicine matriculated at the school during the year that ended

November 1, 1883. Over sixteen thousand patients were rendered available for the purposes of clinical instruction.

THE PHILADELPHIA POLYCLINIC.—The Annual Report of the Philadelphia Polyclinic states that 3301 new patients have been treated in the dispensary between the time of its opening in March and the close of the year 1883; and that this material has been utilized in the clinical instruction in the various specialties of seventy-two pupil physicians.

THE ARCHIVES OF MEDICINE.—G. P. Putnam's Sons take much pleasure in announcing to the subscribers to *The Archives of Medicine* and the profession generally, that DR. E. C. SEGUIN, having resumed his professional work in New York, has been induced to retain the editorial management of the *Archives*. The publication of the *Archives* will, therefore, instead of being brought to a close, as was first announced, be duly continued on the same general plan as that followed during the past six years.

MONUMENT TO DR. SIMS.—Dr. S. D. Gross urges that a monument be erected in the city of New York to the late Dr. J. Marion Sims, and offers to contribute $100 as soon as a committee shall be formed for the purpose of collecting subscriptions.

LEGACY TO THE FRENCH ASSOCIATION.—M. GIRARD has recently left about one hundred thousand francs to the Association Française pour l'Avancement des Sciences. The interest on this sum will be allowed to accumulate for five years, after which it is to be used for the encouragement of persons making contributions to the question of the antiquity of man. The rewards will be given under the forms which the Association may deem proper.

EGYPTIAN OPHTHALMIA IN HUNGARY.—A very severe epidemic of Egyptian ophthalmia has recently broken out in Hungary. Some villages have as many as six hundred affected at one time, and, in spite of every effort by the government and the physicians, the disease seems to be on the increase.

STATISTICS OF FRENCH MEDICAL PRACTITIONERS.—*Le Progrès Médicale* of December 1st furnishes the following analysis of the quinquennial report which the Minister of Commerce has just published:

	1876	1881
Doctors of Medicine,	10,743	11,643
Officiers de Santé,	3,633	3,203
Pharmaciens,	6,232	6,443
Herbalists,	983	982
Midwives,	12,847	13,403

The number of communes in France is 36,097; in these 3645 doctors alone practise; in 1914, Officiers de Santé alone practise; in 743 both Doctors and Officiers de Santé practise, while in 29,795 there are neither doctors nor officers.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending January 5, 1884, indicate that neuralgia and dysentery have increased, and that inflammation of the kidney, tonsillitis, intermittent fever, and typho-malarial fever have decreased in area of prevalence.

Compared with the average for the month of December in the preceding six years, diphtheria, remittent fever, pneumonia, consumption, and typho-malarial fever were less prevalent in December, 1883.

Including reports by regular observers and others, diphtheria was reported present during the week ending January 5, and since, at fourteen places, scarlet fever at nine places, measles at two places, and smallpox in Orleans Township.

OBITUARY RECORD.—HENRY AUGUSTUS DU BOIS, M.D., died of paralysis, in New Haven, Conn., on January 13th, at the age of seventy-three years. He was the sixth lineal descendant of Jacques Du Bois, a French Huguenot, who came to Ulster County, New York, in 1675. He received his Arts degree from Columbia College, New York, in 1827, and the degree of M.D. from the College of Physicians and Surgeons, in 1830. The degree of LL.D. was conferred upon him by Yale College, in 1864; and in the same year he was elected a member of the Academy of Arts and Sciences of Connecticut.

NOTES AND QUERIES.

LEAD-POISONING IN CANNED VEGETABLES.

To the Editor of THE MEDICAL NEWS.

SIR: In the report of one of Dr. Billings's lectures on "Municipal Hygiene," as published in THE MEDICAL NEWS of December 22, 1883, there occurs the following sentence, which requires an explanation from me.

"A few cases of lead-poisoning have been reported (one, by the way, in THE MEDICAL NEWS for September 8, 1883, by a Maryland physician; but since, Dr. Billings has had those cans examined by and analyzed under the supervision of Prof. Remsen, and no trace of lead could be found in the contents)." At the time Dr. Billings asked me for some of the corn for examination I was only able to procure one out of the four dozen cans put up by the family poisoned; the rest having been consumed or thrown away. I am sorry I could not have sent him more than the one, as my own examination showed that lead was not present in the contents of all the cans. I examined three of them. One of these gave only a brownish discoloration with sulphuretted hydrogen, and I did not carry my examination further, as that delicate test did not show the presence of lead.

The contents of the other two gave the characteristic reactions with sulphuretted hydrogen, ammonium sulphide, potassium iodide, and potassium chromate. As I was careful to have pure reagents and to follow carefully the directions for qualitative analysis, given in the standard works on the subject, I am certain lead was present in the contents of two cans.

I also ascertained there were two different lots of cans purchased.

This explanation is sent only in the interest of truth, and to aid in those investigations that are taking place in this country and Europe to detect danger to the public health, if any exists, from the use of canned food.

WM. E. MAGRUDER, M.D.

OLNEY, MD., January 4, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 7 TO JANUARY 14, 1884.

BROWN, P. R., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Huachuca, A. T.—*Par. 9, S. O. 119, Department of Arizona*, December 27, 1883.

EGAN, P. R., *First Lieutenant and Assistant Surgeon.*—Upon reporting of relief to proceed without delay from Fort Huachuca, A. T., to Fort Apache, A. T., and report to the commanding officer for duty at that post.—*S. O. 119, Department of Arizona*, December 27, 1883.